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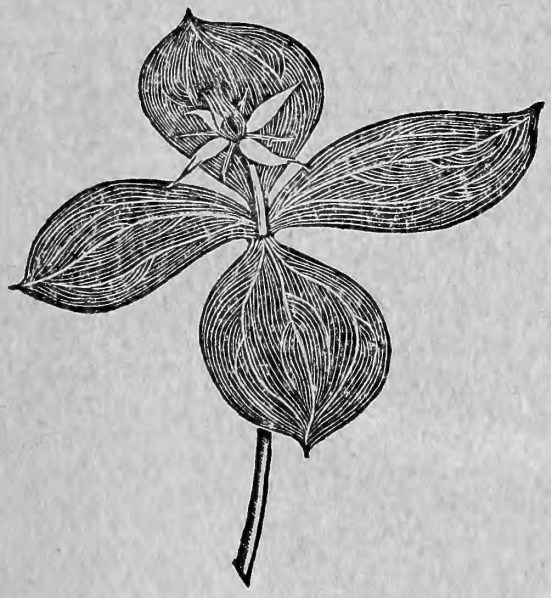
BRITISH MUSEUM
- 5 APR 1968
NATURAL HISTORY

The Reading Naturalist

No. 20



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THE READING NATURALIST

No. 20 for the year 1966-67

The Journal of
The Reading and District Natural History
Society

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Meetings and Excursions, 1966-67

"Further Work on the Amphibia" was the title of Mr. Arthur Price's Presidential Address at the Annual General Meeting (attendance 39). Two evenings were devoted to members' exhibits (47 and 53) and one to a film show (64). The lectures given during the winter were "Wild Plants in the Garden", by Miss E. M. Harris (42); "First Ideas about Fossils", by Dr. Errol White, F.R.S. (50); "Colour Camera on Skomer", by Mr. J. Taylor (62); "The Work of the Thames Conservancy", by Mr. A. F. Compton (46); "Termites and their Nests", by Mr. W. Wilkinson (66); "Grassland Problems", by Dr. Alan Smith (44); and "Bats", by Mr. M. G. Hardy (39).

Winter walks and outings were held on 5th November, Padworth Common (attendance 9, on a very wet afternoon); 3rd December, a riverside walk (6); 7th January, Sonning gravel pits (5); 4th February, Whiteknights Park and Lake (16); and 4th March, Mortimer and Pamber (for mosses) (very well attended).

The summer field meetings were: 8th April, Sulham (about 16); 22nd April, Beenham; 3rd May, Englefield Park (for bats: none were seen, and the meeting was repeated on 17th May); 13th May, Riseley Wood; 27th May, Bix Bottom; 10th June, Snelsmore (30); 24th June, Pamber (12, in torrential rain); 5th July, Eversley (16, of whom 3 were members); 8th July, Beacon Hill (17); 23rd July, New Forest (34, limited by the size of the coach); 5th August, Thirle Down (15); 19th August, Woolhampton (10 for walk; 11 for a light-trap session in the evening); 2nd September, Goring Heath to Pangbourne (16); 16th September, Broadmoor Bottom (23); 7th October, fungus foray (about 70).

The ninth annual Young Naturalists' Evening was held on 2nd March in the Large Town Hall. The audience of about 500 Reading school children heard Dr. F. B. Hora, Dr. John Allen, Mr. Robert Gillmor and Mr. B. R. Baker answer questions selected from the 734 submitted and presented to them by the Questionmaster, Mr. J. F. Newman. Eight prizes, given by this Society, were won by: Margaret Gaines (12½ yrs.), Kendrick School; Karen Henderson (10), St. Michael's Primary School; Christine Kiely (8½), St. Joseph's Convent Preparatory School; Stephen Kirwin (11), Manor Junior School; Carol May (14), Cintra Secondary School; C. R. Stringer (11), Reading School; Jennifer Tee (11), Kendrick School; Sheila Willoughby (10), Redlands Primary School. The winners received their prizes from the Right Worshipful the Mayor of Reading, Alderman W. J. Allum, J.P., who, with the Mayoress, then joined the children to watch the film 'Journey into Spring'.

FURTHER WORK ON THE PROGENY OF SPAWN FROM ALBINO FROGS (RANA TEMPORARIA L.)

By Arthur Price

As reported last year (Price 1967), the seven frogs bred from the white spawn laid in 1965 were expected to breed precociously in 1967. Six females and one male (called Charlie) were available; but, as the male showed no inclination to breed in the spring of 1967, two males, caught in a pond in Caversham, were used. All six females laid black spawn in their second year. Three of these clumps of spawn proved to be infertile but the other three were fertile. One male fertilised three of these clumps of spawn, in addition to that of the Matriarch (see below). Each pair of frogs was placed in a separate aquarium, 24" X 12" X 12", so that the type of spawn laid could be ascertained.

The frogs were weighed before and after oviposition, the average weight loss being 33%. Some of the tadpoles which hatched were placed in the lake in Whiteknights Park immediately, where a few small frogs were placed at a later date.

When the breeding was completed, the frogs were placed in the froghouse and fed on worms. All the frogs except Uno, the frog with the distorted urostyle, made good progress. Later in the summer, when slugs were used as the main item of food, Uno also made good progress. This was due to the fact that slugs do not move as fast as worms and do not burrow.

The frogs are now (winter 1967) hibernating in the swamp in the froghouse under piled turfs.

Ten frogs which hatched from the 1966 albino spawn were kept, in order to provide more males to breed with the 1965 females, but unfortunately all of them turned out to be females. This means that only Charlie, who has since made good progress, is available. It is hoped that he will breed in 1968. These female frogs, which have been fed on the common field slug Agriolimax reticulatus (Muller), have made exceptional progress and should breed precociously in 1968. The main interest in the ten 1966 females is to find out if one or more of these females is going to lay white spawn.

As with the 1965 frogs, the 1966 females have been individually identified by mapping the black pigment patches on the dorsal surface. All the 1966 females were placed in a tank to hibernate on 5th November. By 3rd December 1967 seven of them had died due to the decomposition of the turf used in the hibernating tank. Mr. C. Leeke dissected these

frogs and found black spawn in all cases.

One frog, (given to me by Mrs. B. M. Newman), which also hatched from the 1966 white spawn, had a fifth leg growing under its chin. This extra leg does not prevent it from feeding and it is making good progress. Mrs. Newman stated that the fifth leg grew after the four normal legs had developed. It may be a male.

On 28th February 1967, Mr. Masterman (11, Buxton Avenue, Caversham). reported that he had captured the frog which he thought had laid the white spawn in 1965 and 1966. I collected this frog from his pond and found it to be normally coloured, except for the characteristic black pigment patches on its back. It was a very large frog, 80 mm. in length, and weighed 66 gm. A male, which was found in the same pond, was also taken for breeding purposes. In order to prove that this frog did lay white spawn, the male and female were placed on their own in the froghouse. On Friday, 10th March, 1967, 630 cc. of spawn was found in the froghouse, consisting of approximately 2998 white eggs and 2 black eggs. Thus, a normal coloured female frog has laid a mixed batch of spawn. This female has been named the Matriarch.

The spawn was fertile and most of the progeny were placed in the lake in Whiteknights Park. From the two black eggs, one normal coloured frog with black pigment patches was bred and is still living. It is now 33 mm. in length. The Matriarch, now in the froghouse, is 85 mm. in length and weighs 90 gm. A careful check will be made of the spawn laid in 1968 in order to establish whether this clump of spawn will also be of mixed colour.

On 14th March 1967, Mr. C. Leeke informed me that albino spawn had been reported in a garden in Highmoor Road, Caversham. When I visited this garden, I found in a pond measuring 8 x 10 ft., 20 clumps of white spawn and 30 clumps of black spawn. No clump was of mixed colour. I took away one clump of white spawn and a sample of each of the other white clumps. The few male frogs, which remained in the pond, were of normal colour with the usual black patches.

This spawn was fertile and a few of the white tadpoles which hatched from the samples did not have the grey eyes usually seen in the tadpoles with a recessive gene for albinism. These tadpoles were assumed to be, and later proved to be, double recessives, having no black pigment whatsoever. I returned to the pond and after a careful search found in all 80 white tadpoles with unpigmented eyes. The distribution of these tadpoles in the pond suggested that they originated from one clump of spawn.

The full albino tadpoles proved to be very vigorous, some growing

to 45 mm. in length before metamorphosis. They fed, in the later stages, on luncheon meat, which proved to be a most convenient and efficient form of meat.

About 5% of the double recessive tadpoles developed the kink in the tail reported earlier in the tadpoles with the recessive gene for albinism. Two of the kinked, double recessive tadpoles developed into frogs with a distorted pelvic girdle. These frogs did not survive.

On 21st May 1967, 48 double recessive tadpoles were thriving, the majority having developed back legs. Shortly before this stage was reached, a black spot was seen on the right hand side of some of the tadpoles. This was accompanied by a loss, in varying degrees, of the pink tinge in the body. This was thought to be due to the excessive breakdown of haemoglobin, with the pigment so formed being stored in the gall bladder. All the affected specimens died, although some survived to the frog stage. The gall bladder was still pigmented at this stage. Three pickled specimens, bearing the black spot, were dissected by Mr. Leeke who stated that the pigmented organ was the gall bladder. Six frogs were successfully brought through metamorphosis but only two of them are still alive. There are, at this stage, no external indications of sex but it is hoped that one or both will prove to be females thus permitting me to breed from them with the aid of another male albino frog in my possession. On 22nd October 1967, the two small albino frogs measured 45 and 42 mm. and weighed 9.7 and 7.4 gm., respectively. It is hoped to establish the kind of spawn laid by a double recessive female.

On 30th May 1967, Mr. B. R. Baker of the Reading Museum told me that Paul Huggins, age 13, of 18, Woods Road, Micklands Estate, Caversham, had reported that he had caught an albino frog in a disused concrete tank near the lake in Caversham Park. Paul, who is a very keen naturalist, had had it for a month and had fed it on slugs. I visited Paul and was given the frog, which was pink in colour with pink eyes. It was 37 mm. long and weighed 4 gm. I named this frog Mickie and kept him in an earthenware laboratory tank in subdued light. It is a very vigorous frog and has fed readily on spiders, beetles, bugs and later on the slug A. reticulatus. Later, the nuptial pads on the pollex proved that Mickie was a male. On 5th November 1967 he measured 61 mm. and weighed 27 gm. I hope in 1968 to mate him with the Matriarch, which lays white spawn, and later with the other two double recessive frogs should one or both prove to be female. There seems to be possibility that Mickie is of the same strain as the Matriarch, for some years ago Mr. Masterman took a number of frogs from his pond to the lake in Caversham Park and Mickie could have hatched from the resulting spawn.

Summary

1. Six female frogs, which developed from the 1965 albino spawn, laid black spawn, precociously, in their second year in the spring of 1967.

2. All female frogs were weighed before and after oviposition. The average weight loss was 33%.

3. 20 clumps of white spawn were found from which 80 double recessive tadpoles were isolated. Two full albino frogs have been bred from these tadpoles.

4. One full albino male frog was caught in Caversham Park and is now 61 mm. long.

5. The Matriarch, a normal coloured frog, laid a clump of spawn of mixed colour, i.e. 2998 white eggs and 2 black eggs.

Reference

Price (A.) 1967 The recurrence of spawn of albino frogs (Rana temporaria L.) in Reading in 1965-66. Reading Nat. no. 19 : 5 - 13.

CONTRIBUTIONS FROM READING SCHOOL

Editorial Note

Although some dozen schools in the Reading area have corporate membership in the Society, it is seldom that the opportunity presents itself for them to make a contribution to the Reading Naturalist. Advantage has therefore been taken in the present instance to publish, in an abstracted form, the G.C.E. theses of three members of Reading School. The Editor is grateful to Mr. C. J. Leeke for having made this material available, and for having abstracted the fuller accounts.

i) SOME OBSERVATIONS ON THE SMALL FISHES OF THE FOUDRY BROOK

By A. W. Helme and B. Wennell

Introduction

The work was carried out where the Foudry Brook, a tributary of the Kennet, flows through Grazeley. A suitable place was found (grid ref. 703684) about 200 yards upstream from the bridge at the junction of Hartley Court Road and Kybes Lane, Pinge Wood.

The fishes in the study were the Stone Loach (Nemacheilus barbatulus), Minnow (Phoxinus phoxinus), Three-spined Stickleback (Gasterosteus aculeatus), Bullhead (Cottus gobio), Gudgeon (Gobio gobio) and Dace (Leuciscus leuciscus). The Stone Loach was studied as to its diet and gonadal development over the year 1966-67 (by B. W.) and the others only as to diet (by A. W. H.) Thus some idea of the competition between them was obtained.

The Foudry Brook drains the Silchester-Mortimer plateau and originates at the confluence of the Silchester Brook and the West End Brook (grid ref. 660630). It falls about 75 ft. in three miles and fluctuates considerably with rainfall; it could rise 6 ft. rapidly and flood the nearby road. The speed of the brook at the site during the fishable periods was between 1 and 4 ft. per second. The width varies from 6 to 20 ft., and some pools are up to 5 ft. deep.

The bed of the stream is mainly of flint gravel, covered by a fine silt in the slower-flowing areas. There were many clumps of Floating Water Crowfoot (Ranunculus fluitans), which often stretched downstream for several yards. The roots of the Crowfoot bound together the sands and gravels of the bed, but the stream eroded

deeper channels between the runs of plants.

Methods

Two nets were specially constructed to capture fish from the fairly loosely packed gravels around the roots of the Crowfoot. The frames were made from ¼-in. diameter steel rod in the form of a triangle, the base being 3 ft. and the other sides 2 ft. each, continuing into a short handle at the apex. A Terylene bag, with 25 meshes per inch, was sewn on to the frame and protected along the 3-ft. edge and around the corners by some plastic tubing, slit open to fit over the seam and held in place with copper clips.

The net was thrust firmly into the gravels at the tail of a run of Crowfoot and the ridge of gravel upstream of the net was agitated either by foot or with a stick. Any fish dislodged by this means were carried by the swift current into the trailing net. This technique accounted for all the fish except the Dace, which were caught on rod and line.

As the fish were caught, they were quickly killed with a blow on the head with a scalpel handle and the visceral cavity was immediately opened to allow rapid penetration of the 5% solution of formaldehyde used to preserve them; this prevented autolysis of the gut and further digestion of the stomach contents. Each fish with a suitable label was placed in a plastic tube of preservative.

Any invertebrates taken at the same time were preserved in 70% alcohol for later identification. The fish were later measured, and sexed by examination of the gonads. Their stomach contents were removed with a spatula, spread on a clean microscope slide in a few drops of water, and teased out with needles, care being taken not to break fragile pieces. As far as possible, the stomach contents were identified under low-power magnification and recorded. To assist in the identification of the contents of the stomachs of some of the smaller fish, or when the presence of arthropod remains was suspected, van Wisselingh's test for chitin was employed: the stomach contents were added to concentrated potassium hydroxide and heated to 160°C. for 20 minutes, which converted the chitin to chitosan. The stomach contents were filtered off and added to 0.2% iodine in 1% sulphuric acid, upon which the chitosan turned to a rose-violet colour and could easily be seen under the microscope.

The gonads of the Loaches collected (altogether from 85 fish) were removed and weighed.

Observations on diets

The feeding of the fish through the year is summarised in Table I.

Food type	Loach		Bullhead		Minnow		Stickleback		Gudgeon		Dace	
Vascular plant matter	+	+	-	-	-	-	-	-	+	+	-	-
	+	+	+	-	+	-	-	-	+	+	-	-
Algal matter	+	-	-	-	+	-	-	-	-	-	-	-
	+	-	-	-	+	-	-	-	-	-	-	-
Aquatic arthropods (small) (1)	+	+	+	+	-	+	+	+	-	-	-	-
	+	+	+	+	+	+	+	+	-	-	-	-
Aquatic arthropods (larger) (2)	+	+	+	+	-	-	-	-	-	-	+	+
	+	+	+	+	-	-	-	-	-	-	+	+
Terrestrial flying insects	-	-	-	-	+	+	-	-	-	-	-	+
	-	-	-	-	-	-	-	-	-	-	-	-
Soft-bodied animals (e.g. worms) (3)	-	-	+	+	-	-	+	+	+	+	+	+
	-	-	+	+	-	-	+	+	+	+	+	+

Key:

Spring	Summer
Autumn	Winter

(1) Small arthropods included water-fleas, midge larvae, black-fly larvae, water-boatman nymphs, aquatic beetles and small water lice.

(2) Larger arthropods included caddisfly larvae, stonefly larvae and large water lice.

(3) Worms included leeches, nematodes and earthworms.

An indication of the components of the stomach contents may be given by the following analysis of invertebrates taken in the net on one visit to the site on 16th December 1966:-

Caddisfly larvae	7	specimens
Midge larvae (*Chironomus* sp.)	5	"
" " (*Tanypus* sp.)	1	"
" " (*Forcipomyia* sp.)	1	"
Stonefly nymph (*Isoperla grammatica* (Poda))	1	"
Waterbeetle larvae (family Helmidae)	6	"
Water Lice (*Asellus* sp.)	5	"
Blackfly larvae (*Simulium* sp.)	11	"
Water Mite (*Hygrobates* sp.)	1	"
Leeches (*Herpobdella atomaria*)	9	"
" (*Glossosiphonia heteroclita*)	1	"
Swan Mussels (*Anodonta cygnea*)	2	"
River Limpet (*Ancylastrum fluviatile*)	4	"

One small earthworm was also found in the stream on that occasion. Nematodes and *Daphnia* spp. were not taken in the net, but were present in stomach contents.

Observations on gonadal development in Loaches

In order to be able to compare the weights of gonads from fish of different sizes, and hence, presumably, of different ages, the weight in grammes was divided by the length of the fish in millimetres. These results were then charted against the month of the year. Unsuccessful attempts had been made to age the fish by counts of scale rings, by opercular-bone rings and by grouping lengths, but none gave acceptable results. The average figures are given in Graph I.

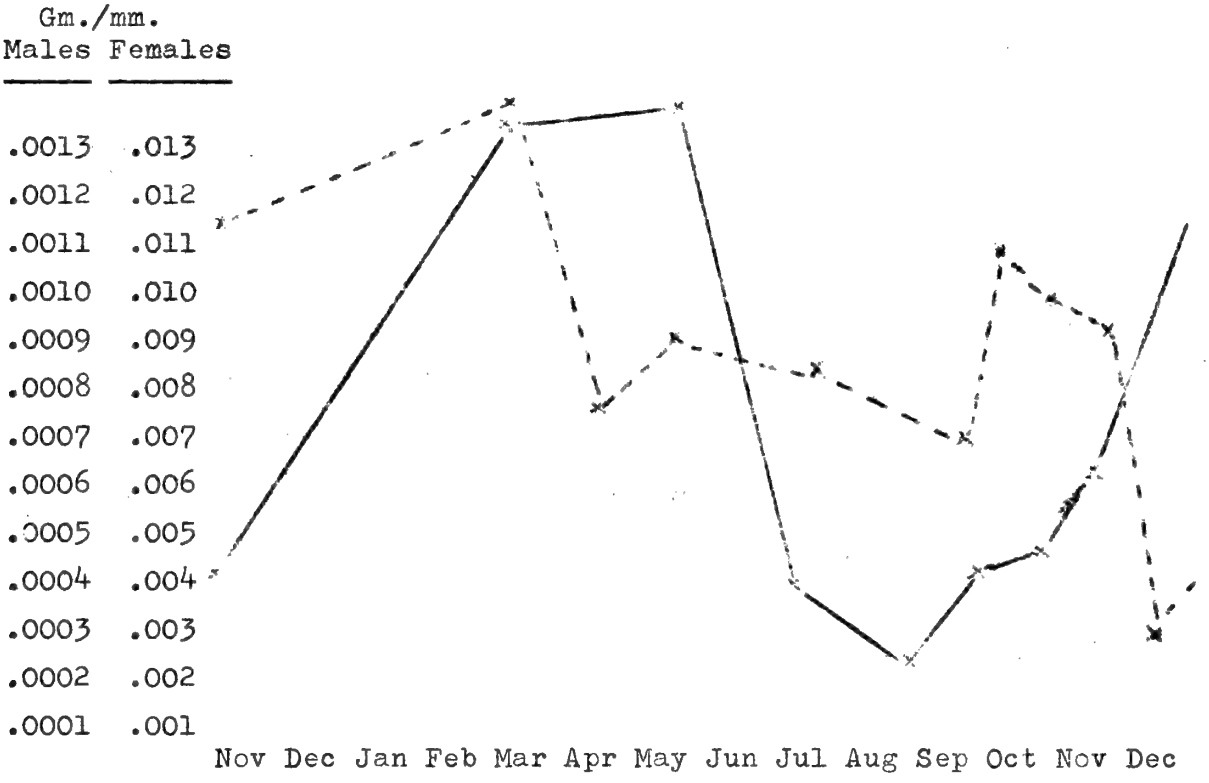
Conclusions

Although there appears to be some interspecific competition for some types of food at some times of the year, this is probably not intense as there appears to be abundant plant and animal matter available throughout the twelve months. Table I is perforce brief; it does not distinguish between young and adult fish. In the Loach, young fish (small size) take a lot of algal matter, whereas older fish do not. There appeared to be no difference between the diets of males and females of any species.

It seems that the females indicate a spawning period around June, but this was not clearly followed by the males. Probably, in view of

Graph I. Relation of length to gonadal weight in the Stone Loach

(Figures are averages of fish caught in the month. See text for explanation.)



the small size of the male gonads, of which the largest was 0.16 gm. and the smallest 0.01 gm., errors might have occurred through including immature fish which did not spawn during this time.

In 15 fish, the gonads were too small for the fish to be sexed. The data in the graph were obtained from 44 males and 26 females. It would be very useful to have some estimate of the total populations present at various times of year, which would perhaps be possible with electro-fishing.

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ii) AN ACCOUNT OF THE WOODLAND PLANT COMMUNITIES OF THE PANG VALLEY

By M. A. Vincent

Introduction

To determine the effects of a variety of soil conditions on the type of woodland developed upon them, a survey was made over an area of the Pang Valley stretching westwards from Bradfield some three miles to Bucklebury and northwards 1½ miles to Yattendon. This area was chosen for its compactness, its variety of soils and its considerable area of woodlands.

Methods

Soil samples were taken with a 2-ft. auger and classified for acidity, permeability, nature and, so far as possible, depth. The soil samples, normally from the 'A' horizons, were tested for acidity by the use of coloured ph indicator papers and the abundance of free lime was assessed by a simple acid test. An idea of the percentage of humus content was obtained by first driving off the capillary water at 100°C. and then burning off the organic constituents in a crucible. Weighings and a simple calculation were made.

Because the samples were taken under a variety of weather conditions, it was not possible to procure a relative moisture-content percentage. An idea of whether an area was well or ill drained could be obtained by direct observation in the field.

The vegetation of a woodland was generally classified into tree, shrub and field layers, differentiation between them being dependent on the height and thickness of the stems of the plants, although this was arbitrary to some extent. Profile transects, usually 50 yards long, were used extensively to obtain the degree of dominance or abundance of the trees and other vegetation. Quadrats, 5 yards square, were used as a means of assessing the percentage ground cover of species in the field layer.

Soils of the region

Plateau gravels rise up to about 380 ft. above sea level and may be as much as 30 ft. deep. Below them are about 80 ft. of Tertiary clays which overlie the Upper Chalk. Valley gravels have been deposited on either side and below the river, which flows in an alluvial layer.

The River Pang is about 180 ft. above sea level, and thus its

valley is about 200 ft. deep. The strata mentioned above emerge at the valley sides and have contributed to the various soils described below.

1. Soils of Plateau Gravels cover about 13% of the area and have patchy distribution on high ground. They consist of unconsolidated clays, sands and gravels forming a variety of soils, all heavily leached and more or less podsolised. The pH varies from 4.3 to 5.2, usually without free lime. The humus content is fairly high, from 8 to 13%.

2. Soils of the Reading Beds and London Clays cover about 55% of the area. They vary from balanced loams to sand over clay or clay over sand. Where these soils tend to be sandy, the pH varies from 4.6 to 5.2, and areas dominated by Birch have a humus content of 5-8%. Drainage is good but podsolisation is slight. Where the clays are more typical, the pH varies from 4.6 to 6.7 and the humus content from 3.3 to 8%.

3. Soils of the Upper Chalk comprise about 25% of the area. True rendzina soils have been unable to form because of the clay element in the soil. Where the clay element may reach a depth of 2 ft., the pH is as low as 5.2, but where clay is absent it is as high as 7.6. The humus content was moderate to high, 7-13%.

4. Soils of the Valley Gravels cover some 5% of the area and consist mainly of loams and clays with only scattered stones, usually less than ¼ in. in diameter. The pH of these loamy clays ranges from 4.8 to 5.2 and the humus content from 6 to 10%, with little formation of horizons.

5. Soils of the Pang Alluvium occupy some 2% of the area and consist of silt and gravel. The alluvium is deep, wet and has a pH averaging 5.3; it is probably kept from becoming sour by the waters of the calcareous Pang. The humus content is high (17%), possibly due to waterlogging preventing the downward movement of humus.

6. Soils of the River Pang. The beds of the centre stream and faster runs are liberally strewn with pebbles and rocks, whereas the quieter waters flow over fine sandy silt which also contains pieces of chalk and has a pH value of 7.6 when shaken with river water. Samples from the banks had about 15% of silty, black humus.

Vegetation of the region

In this shortened account, it is not possible to discuss fully the plant associations, but in Table II are shown the dominant plants in relation to soil types.

Table II. Soil types in relation to dominant vegetation in the Pang Valley

Soil type		Tree layer		Shrub layer	Field layer
General	Actual	Dominant	Sec. Dominant	Dominant	Dominant
Plateau Gravels	Gravel & sand	Oak (*robur*/ *petraea*)	Birch	Gorse	Bracken
	Gravel & clay	Oak (*robur*)	Birch	Gorse/Holly	Bracken
	Mainly sand	Beech/Oak	Birch	Hazel/Gorse	Bracken
	Mainly clay	Oak (*robur*)	-	Hazel	Bramble
Tertiary Clays	Sandy loams	Beech	-	Holly	Bramble
	Clays	Oak (*robur*)	Cherry/Ash	Hazel	Bramble/ Bluebell
	Neutral chalky clays	Sycamore/ Oak (*robur*)	-	Elder	Bluebell
Chalk	Clay over chalk+	Beech	-	Elder	Dog's Mercury
	Chalk soils	Beech	-	Elder/ Hawthorn	Dog's Mercury
Valley Gravel) Damp Silts)	Loams	Sycamore	Hornbeam	Elder	-
	Clays	Hornbeam	-	Elder	Nettle
Alluvium) Wet Silts)	Silt & sand	Alder	Willow	Hazel	Dog's Mercury

\+ Silty clay of undetermined depth, but probably not more than 3 ft.

Conclusions

The competition between Oak (principally Quercus robur) and Beech (Fagus sylvatica) is one of the main features of the woodlands in the survey area. The Oak is widely tolerant of most soils in the area, and its absence from some woods appears to be the result of vigorous competition, particularly from Beech.

In some woods, the roots of Oaks were seen to penetrate the Chalk. Oak is tolerant of limy soils, and its absence from so many seems to be the result of the soils being even more favourable to Beech. This apparent attractiveness of Chalk for Beech woodland appears to be more connected with their well-drained habit than with their lime properties, for Beech also dominates on many well-drained sandy loams, whose surface pH is often below 5.0 and beneath which the Chalk must lie at a depth of 100 ft. or more.

Beech was never found to dominate on heavy clays or on damp or low-lying soils, where Oak was always more abundant. On the wettest soils of the Pang Alluvium, Oak gave way to Elm (Ulmus), Alder (Alnus) and Willows (Salix).

The Sessile Oak (Q. petraea) was only found to dominate on the poorest and driest of the gravel soils, principally where the matrix was of sand rather than clay.

Silver Birch (Betula verrucosa) and Sweet Chestnut (Castanea sativa) were most abundant on the better drained sandy soils of the Tertiaries and the Plateau Gravels, although both were present (though never dominant) in some of the woods of the Upper Chalk. Birch was tolerant of most soils from the banks of the Pang to the Plateau Gravels, but its low stature, short life and lack of shade to suppress competitors are handicaps in all but the poorest soils or where major trees may have been felled.

In contrast to Birch, Sycamore (Acer pseudoplatanus) seems to have many advantages; it is widely tolerant of soil conditions, grows quickly to a good height, casts deep shade and sets seed prolifically. Despite these factors, Sycamore dominates in only three of the woodlands examined, and it seems probable that it is discouraged because of the low commercial value of its timber.

From the findings given in Table II, it may be seen that in the shrub layer, Elder (Sambucus nigra) is more tolerant of lime and shade than is Hazel (Corylus avellana), and Gorse (Ulex europeaus) succeeds only on the poorer, drier soils.

The formation of the different associations depends more on the

drainage capability and depth of the soil than on other factors. The pH and free-lime content of the soil have little effect and are themselves usually determined by the two primary factors. The geological composition of the soil is of importance in that it determines the primary factors, but as the Upper Chalk never forms true rendzinas, calcicole associations are non-existent.

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REMINISCENCES IN NATURAL HISTORY

(The unnoticed deaths of ten million million of our fellow creatures)

By the Rev. S.E. Chavasse

Our President has asked me to record some reminiscences of natural history, for I can look back to one of my earliest recollections over 80 years ago. That was nothing to do with natural history: it is the memory of my twin cousins in their prams in Oxford. A little later, I can bring back the memory of the hand-lighted decorations for the 1st Jubilee, when Britain occupied the place of the world's first and richest nation. Nature here has altered just as much.

Early in life I was bringing in snails, ants, grasshoppers, caterpillars (and getting rashes from Hairy-bears and Palmerworms) and searching plants and palings. I remember my delight in finding a Miller or Peppered moth. In 1893-8, the horse reapers in Worcestershire called in every meadow, and always left a patch in the centre of the field for the nest of the Corncrake. The last I heard was in 1928, near Ufton Court.

One of our ponds was a dew-pond, full of hundreds of baby newts; a Wryneck (still not uncommon in 1897) built in a willow above it. The other pond was almost dry, and from holes in its mud I brought out pails full of great Water Boatmen. Hornets and their nests were plentiful, and in the hop-yards (now gone) were Commas and 'hop dogs and cats' (Pale Tussocks and Vapourers). A pair of Firecrests nested next door.

I recall some spectacular frosts. In 1892 every tap in Oxford was frozen and everybody went down with 'flu. In 1895 the Severn froze when it was in full flood and was then covered with deep snow; skating went on to the end of March on swept pieces.

In 1898 I went to Wellington, where a recently hatched Tiger Moth enthused me to collect - and to get the College prize. In three years I had found most of the Macrolepidoptera, and taken at sugar on Sallow the noted locals Orrhodia rubiginea and Lithophane semibrunnea. In 1900 there was an invasion of all the Yellows, which I also caught in the New Forest. I talked to Brusher Mills, with his sack of vipers, and sugared for the Crimsons. In 1902 I often biked to the Swinley Woods; the great oaks were stripped bare in June by millions of Winter Moths, but there were many rarer species - the December Moth, Black Arches, Purple Hairstreak, Oak and Great Oak Beauty, and Bee Hawks at the Bugle and Rhododendrons. Trapedzina was there, enjoying its cannibal feasts, especially on other Noctuid larvae. Near the station were Chalk-hill Blues. A retired clergyman caught a Camberwell Beauty in his greenhouse in 1902, and in 1909 I found a small larva on Sallow and later saw three flying at Lynde and Eastbourne, all yellow-bordered. Large Tortoiseshells were fairly common on Cossus birches, and webs of larvae were found on elms. The last I saw were near my Sussex parish in 1920-21, 630 feet up, where it had never been common.

Larvae of the Lunar Marbled Brown and Marbled Prominent were beaten from oaks. Those of the Scarce and Iron Prominents were more difficult to spot, stretched on the purple birch stems and like a golden leaf. But wherever one turned by the road-side at night there were Geometer larvae, such as those of the Mottled and Willow Beauties, and on the road-side Sallows were those of such Noctuids as the Broad-bordered and Lesser Yellow Underwings. Also present were

Eyed Hawks, the Puss Moth, various Kitten moths, Scallop Shell, Northern Eggar (callunae) and Golden Y. Nightjars and bats were busy in the copses catching Geometers. On sallows, Pine Beauty and Autumn Chestnut were in abundance; on ash, xerampelina and flavicornis were common; Buff Arches, Peach Blossom and Sprawler were there; Silvery Arches was rare, but I found three Emperors (which I bred), Dark Tussock and a Large Emerald several years from the egg.

I was more interested in finding larvae than imagines. The High Brown Fritillary and Green Hairstreak were common. In 1903 I moved to Oxford, where there was Gilvago, campions and Rest-harrow under Shotover. There I saw the Convolvulus Hawk in 1906. Local collecting was supplemented by visits to the New Forest and to Bagley Wood, where I found again the Scarce Green Silver Lines and Fiery Clearwing. A visit to Wicken Fen in 1907 brought Swallowtails, Reed Moths and Wainscots; at Tuttenham were Lulworth Skippers. A week at Cranbourne on the Chase gave many Coronets, Green Arches, aprilina and six Scarce Merveille du Jour (Diphtera orion) - only two had been caught in Dorset before. Again in the Fen, fagi, Brown Hairstreak and about 150 Tigers, the latter fluttering round an acetylene-lit sheet and including one yellow variety. Both Bordered Beauties and Wainscots were taken in hundreds at sugar and light. This was long before the disastrous fire, which broke out after the Keeper had razed part of the sedge as usual.

At Coudwell, Wiltshire, the Lappet, crataegi , Chimney Sweep, ridens larvae, Lilac Beauty, Small Eggar and Scarce Tissue were locally common. The Marbled Green (Bryophila glandifera), which is supposed to live near the sea, occurred both there and at Ufton.

In 1909-10, Isle of Wight disease destroyed the occupants of three skeps of bees; it continued to occur for years, despite spraying all bees twice with proflavine. It was 20 years before the cause - mites - was established.

About 1911 there was a slight decrease in the numbers of less common Lepidoptera, and this grew much more noticeable ten years later. The cutting of road banks and the poisoning of weeds on plough land , together with steamer farming, may have contributed to this. The more reckless collectors were also partly responsible, as was the weather for, even in sunny

Sussex, the Goldcrest and other birds seemed to be exterminated in the winter of 1918. So were Fieldfares and Redwings, which had flocked as usual to the holly berries. Just as in recent hard winters, the frost alone killed many. Tree-creepers were affected, and even Wood Pigeons died, too weak to peck the brussels.

I feel that there must be other causes too for the reductions in numbers, such as dampness in summer causing a diarrhoea or, in the case of chrysalids, moulds. These latter would be particularly serious in the case of gregarious insects, such as Eyed Hawks, Puss Moth (both eggs and larvae), Buff Tip, Elephant Hawk and Mullein Moth. I estimate that there are not now one tenth of the Lepidoptera of 1900. Of course, this must affect the rarer species more. We know that, with the near extinction of the cart-horse, our fly population is decimated; but in 1900 some woods, like the plantation above Buxton, had every tree covered with flies in August, although there were no horses in the vicinity. Similarly, Winter Moths were so numerous that they stripped forests and orchards. The Cabbage Moth and the Whites have also decreased in the last 12 years, although they come over from the Continent in clouds. On the other hand, I saw no Comma in Berkshire before 1918, and the Painted Lady was very rare, though I found some on thistle and Ragwort at Oxford in 1904. Bradfield College classes began to find larvae of the Pine Hawk at Ufton in, I think, 1947.

I was rector of Ufton Nervet from 1st February 1927 to 1st January 1952. It was an ideal place for a naturalist, even if an amateur. Its population of 425 in 1800 had decreased to 265 and further to 185 in 1939, when the few girls gave a very creditable concert under Miss Keap (whose family name was said to be derived from being bee-keepers).

Though I did not see the Smooth Snake found by Wellington boys in 1950, the Bee-field (which at one time contained 100 hives) usually had blind worms, vipers (which swam in the pond) and Grass Snakes. Once I saw a Grass Snake quite five feet long seeking water; there was a commotion, and I saw a rat climbing a stem, with the snake biting its neck. I saw another of this unusual size at Padworth, and found a skin of another that was at least that length. Hedgehogs were numerous, and we found their nests in the spinney. The last red squirrel dreys were near the Island in 1952, and a family was raised at Mortimer West End in 1957. The grey squirrel was

always nesting in the spinney. One year they stole goslings from under their mothers; they ate nests of full-grown Blackbirds and carried full-grown Rabbits. There were three Badgers' sets within the area, and three earths, the latter surrounded by the wings of rotting pheasants and partridges, so the keepers were glad to get rid of Foxes. I have seen (1959 it would have been) a half-grown Coypu at Odiham Castle, feeding boldly in the canal.

But birds were the chief interest. A Peregrine killed a Wood Pigeon in a garden, another carried off two pigeons and was later shot. The Burghfield buzzards soared over the Benyon's game cart, and I measured a span of 4 ft. 8 in. for one that was dead. Sparrow Hawks and Kestrels were common before 1954. I once watched a male pursue a Chaffinch through a thick holly bush, and another eat a Sparrow beneath the Rectory windows; a third killed a big Hawfinch. A pair of Hawfinches laid five eggs in the garden, where there were often nests in the 150-year-old yew hedges. A Black Redstart nested for two years, and Bullfinches in 1927 until someone put down poisoned seed. There were always Goldfinches in the churchyard, where we once drove off a man trapping Wood Pigeons. A Stock Dove and Jackdaw nested in the 900-year-old yew in the churchyard until one year when Starlings took over. Mallard, Moorhen and Dabchick all reared young, but one year a pair of rats took all the young before they were ten days old.

More toads than frogs spawned, and we thought it was the Dabchicks who left piles of half-chewed bodies of toads lying about, but it could have been the rats. Of other examples of predation, there were (apparently) Sparrows who left the mangled remains of Emperor larvae on the bee-hives, and Badgers ate out several wasps' nests.

When the iris were out, I saw at the gloaming a dozen Elephant Hawks and six or eight Small Elephants with some Arches and other Noctuids feeding; I found a female Small Elephant just emerged on a patch of Bedstraw, Eyed Hawk and Sallow Kitten on the Sallow, and a Death's-head Hawk settled on the face of a hive. On going round the hives one night, I heard a squeaking; fetching a torch, I found a Death's-head full of honey. Green Foresters and Five-spot Burnet bred freely until my son kept chickens and cockerels, which also cleared out black slugs and most of the mice! White Admirals came now and then, and once a Marbled White; the Small Argent and Sable and Latticed Heath were common. I also recorded a coal-black Negro, with white neck band, like the Argent and

Sable of birch trunks - but there is no coal smoke in Ufton!

A Redpoll and two Siskins came to the Rectory; Nuthatch, Tree-creeper and Turtle Dove built, but the Swallows, Swifts and Martins grew steadily fewer. Cuckoos laid regularly in the nests of Hedge-sparrows and Robins in the top of the hedge, usually safe at first but sometimes killed by cat or dog later. It is often debated whether the mother Cuckoo takes any further interest in her 30 or so young. At Wellington, one laid in a Blackbird's nest, but mistiming, as the egg did not hatch until about three days after the blackbirds'. At Edgebarrow Lodge, where we lived, I once tried to observe a Cuckoo's destruction of its four big foster brothers. I managed to see the fate of the last and largest, twice as large as the Cuckoo, which heaved it over the edge and then lay exhausted. At the withy bed they laid in the nests of warblers, especially Reed Warblers, and we found several eggs, light dusky grey with small spots, and a dozen young, their yellow open bills filling the top of their deep homes. At the Ufton crossing, beside the bed, I watched five or six Cuckoos pursuing a female along the low hedge.

In about 1934 the Kennet overflowed and left mud all over the bed. We saw the pug marks and slide of an Otter, and sought her six cubs everywhere. We found four sizable fish with their shoulders bitten out, two probably dace of about 4 lb. Barbel, trout and eels were caught by the bridge, where I had observed the Marsh Harrier. Among birds found there were the Plover, Redshank, Snipe, Bullfinch and Grasshopper Warbler; nests of the Reed Bunting were also found. I counted 53 magpies on the arable of Island Farm, and a shoot beyond yielded 120 jays.

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WEATHER RECORDS IN 1967

By A. E. Moon

The data refer to Reading University Meteorological Station. A "rain day" is a day on which rainfall equals or exceeds 0.01 of an inch. The averages for temperature refer to the period 1931-60, those for the amount of precipitation and number of rain days to 1916-50, and those for sunshine to 1921-50. For the designation of frost and ground-frost days see Weather Records in 1961.

STATION - READING UNIVERSITY. HEIGHT ABOVE MEAN SEA LEVEL - 148 ft.

		JAN.	FEB.	MAR.	APR.	MAY	JUNE	JUL.	AUG.	SEP.	OCT.	NOV.	DEC.	YEAR
MEAN DAILY TEMPERATURES °F.	MAX.	45.2	48.6	52.5	54.6	60.2	67.9	73.7	69.7	64.3	58.1	49.0	45.0	57.5
	MIN.	36.6	37.3	39.6	40.7	45.9	50.5	55.8	54.1	51.7	47.3	37.6	35.1	44.4
	MEAN.	40.9	42.9	46.1	47.7	53.1	59.2	64.7	61.9	58.0	52.7	43.3	40.1	50.9
	DIFFERENCE FROM NORMAL	+1.9	+3.0	+2.2	-1.0	-1.2	-0.9	+1.6	-0.9	-0.5	+1.3	- 1.5	-0.9	+0.2
EXTREME TEMPERATURES °F.	E. MAX.	56	55	62	70	79	75	83	78	71	68	59	55	83
	DATE	29	2,3 20,25	21	17	11	14	17	22,27	26	7,8	11	22,23	Jul.17
	E.MIN.	24	29	31	28	30	43	47	47	41	35	28	19	19
	DATE	9	14,18	30	1	3	13	9	3,30	21	30	17	9	Dec. 9
	E. GRASS MIN.	19	23	25	21	22	31	39	39	33	25	17	5	5
	DATE	9	8,13,18	30	1	3	13	9	5	8,9	30	17	9	Dec. 9
DAYS WITH	FROST	9	5	1	1	1	0	0	0	0	0	5	11	33
" "	GROUND FROST	15	13	11	8	2	1	0	0	0	5	16	18	89
SUNSHINE HOURS	SUM.	60.9	93.5	173.1	139.1	182.0	232.3	252.1	185.3	119.2	101.2	78.7	69.6	1687.0
	% POSS.	23	33	47	34	38	47	51	41	31	30	29	28	30
	DAILY MEAN.	1.96	3.33	5.58	4.63	5.87	7.74	8.13	6.00	3.97	3.26	2.62	2.24	4.62
PRECIPITATION ins.	AMOUNT	1.75	2.17	1.84	1.44	4.46	1.87	2.56	1.93	2.07	5.03	1.56	2.48	29.16
	RAIN DAYS	16	13	13	12	23	5	8	14	16	21	12	19	172
	MAX. RAIN IN 1 DAY	0.33	0.65	0.61	0.37	1.01	0.95	1.84	0.67	0.65	1.40	0.52	0.68	1.84
	DATE	22	27	8	24	14	25	22	18	25	16	1	18	Jul.22
LONGEST RUN OF CONSECUTIVE	RAIN DAYS	13	6	6	4	9	4	3	7	4	8	5	6	75
LONGEST RUN OF CONSECUTIVE	DRY DAYS	6	13	12	7	4	18	7	10	7	2	11	4	101
SNOW OR SLEET DAYS		4	0	4	1	1	0	0	0	0	0	0	6	16
DAYS SNOW LYING		0	0	0	0	0	0	0	0	0	0	0	5	5
VISIBILITY FOG AT 0900 G.M.T.		1	0	0	0	0	0	0	0	0	0	1	3	5
THUNDERSTORM ACTIVITY DAYS OF THUNDER		0	0	0	0	7	2	4	2	0	0	0	0	15
DAYS OF HAIL		0	1	1	0	2	0	0	0	0	0	0	0	4
AVERAGES MEAN DAILY TEMPERATURE °F.	MAX.	44.2	45.5	51.4	57.0	63.5	69.1	71.8	71.6	66.6	58.6	50.5	46.0	57.9
	MIN.	33.8	34.2	36.5	40.5	45.3	50.9	54.5	54.0	50.2	44.2	39.2	36.0	43.3
	MEAN.	39.0	39.9	43.9	48.7	54.3	60.1	63.1	62.6	58.5	51.4	44.8	41.0	50.7
PRECIPITATION	AMOUNT	2.41	1.78	1.69	1.90	1.86	1.61	2.53	2.20	2.10	2.60	2.74	2.30	25.7
	RAIN DAYS	17	13	13	14	13	11	13	13	13	15	15	17	167
SUNSHINE	SUM.	52.7	70.0	120.9	156.0	195.3	210.0	192.2	182.9	138.0	105.4	63.0	46.5	1532.9
	DAILY MEAN.	1.7	2.5	3.9	5.2	6.3	7.0	6.2	5.9	4.6	3.4	2.1	1.5	4.2

MONTHLY WEATHER NOTES

1967

January	This was the warmest January since 1957 and the night of 27th/28th was the warmest for that month since 1st, 1960. The 29th was the warmest January day since 27th, 1958 (56°F).
February	The sunniest since 1949.
March	The temperature reached 60°F for the first time this year on 20th (61°F); it was the warmest March since 1961. It was also the sunniest March since sunshine records began in the Reading area in 1939, the previous sunniest being 1961 with 167.3 hours.
May	A cold and wet month. The night of 2nd/3rd was the coldest in May since 1945 (minimum then 30°F on 1st/2nd). The previous record of snow or sleet in May was on 17th/18th, 1955. It was also the wettest May since reliable records began at the University station in 1921, but four previous Mays have produced four inches or more, viz. 1955, 4.38 ins., 1932, 4.31 ins., 1925, 4.31 ins., and 1948, 4.07 ins.
June	The sunniest June since 1962. Ground frost has not occurred in June since 1962. A drought period of 19 days ended on the 19th.
July	The sunniest and warmest July since 1959. During a heavy thunderstorm early on 23rd, 0.29 of an inch of rain fell in 6 minutes at 00 h. 30 m. and 0.80 of an inch in 48 minutes from 01 h. 36 m.
October	The night of 8th/9th was the warmest in October since 1st, 1925. The 16th was the wettest October day since reliable records began in 1921. The first ground frost of the present autumn occurred on 18th (28°F).
November	The first air frost of the autumn/winter period occurred on 9th (31°F).
December	Sunniest December since 1962. Forty-two hours of continuous frost occurred between 22 h. on 7th and 16 h. on 9th.

THE RECORDER'S REPORT FOR ENTOMOLOGY

1966-67

By B. R. Baker, B.Sc., F.M.A., F.R.E.S.

Order Orthoptera (Grasshoppers, Bush Crickets, etc.)

Tetrix subulata (L.) Slender Ground-hopper

A single example was taken at Beggar's Bridge Green, Pamber Forest, Hants on 9th July. There is evidently a colony of this unobtrusive little ground-hopper in this locality, for 2 specimens were taken in 1965, but only by carefully searching through leaf litter is one likely to see the species.

Meconema thalassinum (Deg.) Oak Bush Cricket

This attractive green bush cricket appears in the adult stage from early until late autumn; Dr. Burtt's latest date this year was 17th November. The usual way to find them is to search on the trunks of oak or beech, though mostly females will be found by this method. Males may be taken by beating oak and other trees. Searching the trunks may at times reveal high numbers of Meconema, as for example 31 females and 2 males noted in the colony at Goring Heath on 26th September. This was following a night of gentle rain and mild weather, and should be contrasted with the record of a solitary female seen on 27th September after a night with clear skies and much lower temperatures.

Order Odonata (Dragon-flies)

Cordulegaster boltonii (Don.) Golden-ringed Dragon-fly

This was the most notable insect seen at Pamber Forest on 24th July on the occasion of the Society's annual excursion. This specimen was found clinging to a grass stem during an extremely heavy downpour of rain, and as this pattern of weather persisted for most of our stay it is small wonder that such sun loving creatures, as indeed are most insects, were few in number.

Order Hemiptera Sub-Order Homoptera (Leaf-hoppers, Aphids, etc.)

Ledra aurita L.

The biology of this unusual looking insect does not appear to be

fully known at present. We have had only two local records of the adult's occurrence prior to 1966; these were chance findings resulting from beating oak at Pamber Forest and maple at Hardwick in a quest for other insects, and in any case refer to some 15 years ago. Dr. Burtt has now discovered Ledra's presence in the beechwoods at Goring Heath, and he, actively aided by Mr. Peter Crow, has now added over a dozen records of this species to our meagre number from the Reading area. The adults have been found sitting upon beech trunks at dates from 28th September to 11th November - the nymphs have been found in June, October, November, and December.

From such information as exists on this species the British Museum (Natural History) tells us that Ledra passes the winter in the egg stage, although occasionally the adult gets through. However, the finding of nymphs in November and December appears to indicate that this stage is also an overwintering one. The insects, when clamped down on the beech trunks, conceal themselves by spreading their wing cases outward against the trunk, resulting in the appearance of an oval blotch some ¾ in. long. Records of nymphs in the first quarter of the year would be of considerable interest and value in solving this question of yet another overwintering stage.

Order Neuroptera (Alder-flies, Lace-wings, etc.)

Sympherobius elegans Steph.

A single specimen of this rare lace-wing was taken at Goring Heath, Oxon on 29th August 1963 by Dr. Burtt - the record, though a late one, must merit inclusion in this report for the specimen (now in the collections of the British Museum (Natural History)) is only the fifth that they possess. Killington (British Neuroptera, Ray. Soc) says that S. elegans is associated with deciduous trees, with possibly a preference for beech. Practically nothing is known of the life-history.

Order Trichoptera (Caddis-flies)

Brachycentrus subnubilus Curt. The Grannom, or Greentail

This caddis, one of the earliest to appear in the spring, is an abundant species on the river Kennet where it may be seen flying across the water or at rest on river-side vegetation. During the afternoon of 15th April the typical spring flight of Brachycentrus was observed on the Kennet at Woolhampton. At 6.30 p.m. large numbers of this caddis were noticed dancing in a cloud around a stout post in the middle of the river - the post being part of the swing-bridge supports. The post was then seen to be thickly covered with caddis sitting tightly

packed just above the water's edge. From time to time individuals would crawl down under the water, still clinging to the submerged parts of the post, and what appeared to be a silvery coating was in fact an under water throng of Brachycentrus engaged in a mass act of oviposition. In this throng individuals could be seen walking about at depths between 2 and 10 in. below the surface, below this depth the current was too strong to allow good observation. Large numbers of greenish egg masses could be seen among the mass of submerged caddis.

Order Lepidoptera (Butterflies and Moths)

Early appearance of hibernators

Gonopteryx rhamni L. Brimstone butterfly

A male of this species was seen on the early date of 5th March, in the Recorder's garden, and a second specimen observed in full flight across the Butter Market on 15th March.

Aglais urticae L. Small Tortoiseshell butterfly

A specimen was observed by Mrs. A. M. Simmonds on 5th April in St. Lawrence's Churchyard; (this is not an early date for this particular species and it is likely that A. urticae would have been on the wing on 8th March when the same observer saw the honey-bee working at flowers in her garden).

Notes on Immigrant Species

Colias croceus (Fourc.) (Clouded Yellow Butterfly)

During August and September we had several reports of the occurrence of this beautiful immigrant, Mr. Roy Leeke seeing them as close to Reading as Tilehurst. Mr. Crow reports clouded yellows from the clover fields in the Aldworth, Streatley and Bradfield area on numerous occasions this past autumn.

Acherontia atropos L. (Death's Head Hawk-moth)

A larva of this impressive hawk-moth was brought to the Museum in early August having been found on a potato patch at Kingston Lisle. A second example was collected by Mr. Peter Crow from the same locality later in the month. It is necessary to 'force' chrysalids of A. atropos by applying a damp heat of c. 80°F., but (in the writer's opinion) this acceleration of a natural process should be restricted and only used upon species which would not otherwise emerge naturally. Our winters

would kill those Death's Heads that had managed to pupate in the wild, so one has some justification in trying to induce emergence of the moths as described above. Unfortunately both these 1967 examples failed to emerge, but one of the chrysalids was undoubtedly alive on 6th November when hatching could only have been a day or so away. (Cf. the 1950 year, when four chrysalids similarly forced hatched successfully.)

Herse convolvuli (L.) Convolvulus Hawk-moth

Mr. T. J. Homer reports one example of this large hawk-moth attracted to a mercury vapour light-trap operated at Pinkney's Green, Maidenhead, on 23rd August.

Rhodometra sacraria (L.) The Vestal

A single example on 25th August reported by Mr. Homer at the Pinkney's Green trap.

Notes on Resident Species

Apatura iris (L.) Purple Emperor Butterfly

A note on this species was received from Mr. P. F. Le Brocq. He describes the unmistakable behaviour of female iris when intent on the selection of egg laying sites, namely that of flying into the inner parts of a sallow bush, the process known to 19th century lepidopterists as "striking the tree". Mr. Le Brocq's observation was made at Pamber Forest on 26th July.

Strymonidia w-album (Knoch) White-letter Hairstreak

This species has again been reported from the Goring Heath area by Dr. Burt. This year he saw this attractive little hairstreak on the lawn of the King Charles' Head Inn - the butterflies being attracted to patches of Trifolium.

Celastrina argiolus L. Holly Blue

This species, although not rare, is most uncertain in appearing. It is double brooded and the summer brood was well in evidence at Pinkney's Green where Mr. Homer observed about 20 over a period of a week commencing 30th July.

Trisateles emortualis (Schiff.) Olive Crescent

It is with considerable satisfaction that we can report the discovery, for the first time in Britain, of the larva of this local

rarity. On 11th July, the Recorder, in company with Mr. Homer, had the unexpected experience of seeing emortualis adults attracted in some numbers to mercury-vapour lights in the Chilterns. An opportunity was taken to attempt breeding the species but only four eggs were obtained from a captive female, and of these only one hatched. This lone caterpillar progressed slowly but steadily on a diet of dead oak leaves and provided sufficient information for one to seek larvae in the wild. During the autumn the quest proved successful, as did the further search for pupae among dead beech leaves on the woodland floor some weeks later.

Aegeria sphegiformis (Schiff.) White-barred Clearwing

This moth is well established in Pamber Forest, Hants, where the larvae and pupae may be taken in some quantity by a careful examination (and excavation) of alder stems. It was with some surprise, therefore, that from stems of birch cut in mid-April from Cowpond Piece, Ufton Nervet, (and supposedly containing birch clearwings) not that species but A. sphegiformis were produced - the moths emerging from the stems from 31st May until 6th June.

Thaumetopoea pityocampa (Schiff.) Pine Processionary Moth

A female of this species, which is a well known pest of pine forests in Central and Southern Europe, was taken in early July 1966 at a moth trap operated at Burghfield, Berks, by Jonathon R. Jones. Its appearance at Burghfield is a matter of some conjecture; presumably it is best described as an accidental import by means unknown.

Order Diptera (True Flies)

The following notable species have been taken in the Reading area this year:

Ctenophora flavolineata

This strikingly coloured black and yellow "Daddy Long-Legs" was taken by Dr. Burtt at Goring Heath on several occasions between 26th April and 11th May. During a morning's search of beech trunks usually only one specimen might be noted, but on 2nd May (after an over-night fall of snow) three males were taken; on 5th May two males and one female, and on 6th May two males and three females. The height on the beech trunks at which specimens were seen varied from ground level up to 8 ft.

Ctenophora pectinicornis L.

26th May, Gatehampton, 1 male (P.N.C.); 19th June, Gatehampton, 1 female (P.N.C.)

Dictenidia bimaculata L.

19th June in the Windsor area, 2 males (P.N.C.)

Tipula fulvipennis Deg.

An apterous specimen was taken by Dr. Burtt at Goring Heath on 6th July. This was submitted to the British Museum who have provided the following note: "The specimen of T. fulvipennis Deg., has been attacked by a fungus, Entomophthora tipulae Fresenius. There are only two published records of this in the British Isles, which give little information, but the fungus was described from a crane-fly without wings, so presumably this deleate condition is caused by the fungus".

Psilocephala ardea F.

Mr. Crow has had the good fortune to take two specimens of this rare Therevid fly from the Windsor area this year (both specimens on 19th June). They constitute the second and third specimens ever recorded from the home counties, and until this year only 12 specimens had been recorded in this country, all but one of these being from western counties.

Calliprobola speciosa (Rossi.)

9th, 14th and 21st June, all specimens from the Windsor area (P.N.C.) This handsome Syrphid is apparently confined to old forests in the south; the larvae are known to occur in the decaying wood of beech stumps.

Scaeva selenitica Meig.

25th July. Nuney Green, a single specimen, (P.N.C.)

The Recorder would like to express his thanks to the several people mentioned in the Report, without whose records little would have been left to report upon. Many of the specimens mentioned under the various Orders are already in the entomological collections of Reading Museum (or are currently being transferred to the cabinets); they are consequently available for members to study upon request and thereby link a name in a report with the often attractive real object. To the Director of the Museum and Art Gallery, Mr. T. L. Gwatkin, we arealso indebted for the facility to freely use the museum records of entomological material submitted during the year.

THE RECORDER'S REPORT FOR BOTANY

1966-67

By B. M. Newman

This report depends entirely on information sent in by members, and the more members we have observing the local flora the more valuable our records will be. Not everyone will find a rare orchid (we probably know where those are anyway), but you may notice a plant you have not seen before on the piece of waste ground where you exercise the dog. This may be the first appearance of the species in your district, or a reappearance of one once common, so do please report it.

This year we thank the following members for their records, which are initialled in the list:- Dr. H. J. M. Bowen (HJMB), Miss L. E. Cobb (LEC), Miss L. Lapienska (LL), Mrs. V. A. Phillips (VAP), Mrs. A. M. Simmonds (AMS) and Mrs. E. M. Trembath. The plants found by Dr. Bowen in a beechwood N.W. of Nettlebed are all acidophile species indicating leached soil overlying the chalk, and rather uncommon in Oxon. They are :- Deschampsia flexuosa, Juncus conglomeratus, Luzula multiflora, Calluna vulgaris, Carex pilulifera, Carex ovalis, Scirpus setaceus and Galium saxatile. The useful list of records sent by Miss Lapienska are nearly all from the 10km square SU77.

The order and nomenclature are as usual according to "A List of British Vascular Plants" by J. E. Dandy (1958), and an alien taxon (i.e. one known or believed to have been introduced by the agency of man) is indicated by *.

Dryopteris carthusiana (Villar) H. P. Fuchs Narrow Buckler-fern
Crowthorne (HJMB)

Polystichum aculeatum (L.) Roth Hard Shield-fern
Bix Bottom, Oxon. (AMS)

Helleborus foetidus L. Stinking Hellebore
Sulham (LEC); Hurdleshaw (VAP)

Helleborus viridis L. Green Hellebore
Hurdleshaw (VAP)

*Eranthis hyemalis (L.) Salisb. Winter Aconite
Welford Park, Newbury (VAP)

Ranunculus arvensis L. Corn Buttercup or Corn Crowfoot
A decreasing species. Two plants on roadside at Great Lea Common (AMS)

Ranunculus flammula L. Lesser Spearwort
Clayfield Copse (LL)

Ranunculus sceleratus L. Celery-leaved Crowfoot
Near factory at Mill Green; waste ground off Amersham Road at back of Eccles Close (LL)

Ranunculus circinatus Sibth.
Bearwood (HJMB)

Adonis annua L. Pheasant's Eye
3 or 4 plants in cornfield near Blewbury; probably corn cut before seed ripe (AMS)

Myosurus minimus L. Mouse-tail
Abundance of plants at Great Lea Common (AMS)

Aquilegia vulgaris L. Columbine
In Beech wood behind Streatley Hill Hotel (EMT)

Papaver argemone L. Pale Poppy, Long Prickly-headed Poppy
In old gravel pits, Woodley (AMS)

*Papaver somniferum L. Opium Poppy
Mill Green (LL)

Chelidonium majus L. Greater Celandine
Near Clayfield Copse off Peppard Road (LL)

*Brassica rapa L. Bargeman's Cabbage
Ditch by Mill Green (LL)

*Sinapis alba L. White Mustard
Waste ground at back of Eccles Close and Amersham Road (LL)

Diplotaxis muralis (L.) DC. Wall Rocket, Wall Mustard
Abbey Ruins; disturbed ground opposite Museum of Rural Life, Whiteknights Park (AMS)

Lepidium campestre (L.) R. Br. Pepperwort
Silchester Common (AMS)

Coronopus squamatus (Forsk.) Aschers. Swine-cress, Wart-cress
Christchurch meadow; near Lowfield (LL)

*Coronopus didymus (L.) Sm. Lesser Swine-cress
At entrance to track, old chalk pit Henley Road (AMS); Whiteknights Park (HJMB)

*Cardaria draba (L.) Desv. Hoary Cress, Hoary Pepperwort
Hill's Meadow (LL)

Cardamine amara L. Large Bitter-cress
Bearwood (HJMB)

Cardamine flexuosa With. Wood Bitter-cress
Clayfield Copse (LL)

Barbarea vulgaris R. Br. Winter Cress, Yellow Rocket
Mill Green (LL)

Turritus glabra L. Tower Mustard
Woodley, opposite entrance to old aerodrome (per P. le Broc). This species lingers on in this area (AMS)

Rorippa sylvestris (L.) Bess. Creeping Yellow-cress
Has greatly increased in Hill's Meadow; occasional weed in Sutton's trial grounds (AMS)

Rorippa islandica (Oeder) Borbas Marsh Yellow-cress
Waste ground at back of Eccles Close (LL)

Rorippa amphibia (L.) Bess. Great Yellow-cress
Berry Brook (LL)

*Erysimum cheiranthoides L. Treacle Mustard
Waste ground at back of Eccles Close; Mill Green near factory (LL)

Reseda luteola L. Dyer's Rocket, Weld
Off Caversham Park Road (LL)

*Reseda alba L. Upright Mignonette
One plant, coll./det. Miss O. M. Crowson, Reading University (HJMB)

Hypericum humifusum L. Trailing St. John's Wort
Bearwood (HJMB)

Silene noctiflora L. Night-flowering Campion
Goring (VAP)

Lychnis flos-cuculi L. Ragged Robin
Waste ground at back of Eccles Close and Amersham Road (LL)

*Cerastium tomentosum L. Dusty Miller, Snow-in-summer
Henley Road, Oxon; near Caversham Park Road (LL)

Cerastium glomeratum Thuill. Sticky Mouse-ear Chickweed
Chalk slope by Milestone Wood off Caversham Park Road (LL)

Myosoton aquaticum (L.) Moench Water Chickweed
Berry Brook (LL)

Stellaria palustris Retz. Marsh Stitchwort
Eversley (LEC)

Stellaria graminea L. Lesser Stitchwort
All Hallows Road by school playing field (LL)

Sagina ciliata Fr. Fringed Pearlwort, Ciliate Pearlwort
Snelsmore Common, (AMS)

Minuartia hybrida (Vill.) Schischk. Fine-leaved Sandwort
Near Hermitage (by Miss W. M. Keens) (HJMB)

Moehringia trinervia (L.) Clairv. Three-nerved Sandwort
Clayfield Copse (LL)

Spergularia rubra (L.) J & C. Presl. Sand Spurrey
Whiteknights Park (HJMB)

Scleranthus annuus L. Annual Knawel
Near Clayfield Copse (LL)

*Montia perfoliata (Willd.) Howell Spring Beauty
Addington Road, in disturbed ground near new building (VAP)

Chenopodium polyspermum L. All-seed
Caversham Park (LL)

Chenopodium ficifolium Sm. Fig-leaved Goosefoot
Waste ground near Richfield Road (AMS)

Chenopodium murale L. Nettle-leaved Goosefoot
Whiteknights Park (HJMB)

Atriplex hastata L. Hastate Orache
Field by Berry Brook (LL)

Malva neglecta Wallr. Dwarf Mallow
Palmer Park (VAP)

Geranium pyrenaicum Burm. f. Mountain Cranesbill
Path leading to chalk pit from Dunsden (LL)

Erodium cicutarium (L.) L'Herit. Common Storksbill
Grass verges off Douglas Road near Talbot Close (LL)

Oxalis europaea Jord. Upright Yellow Sorrel
Crowthorne (HJMB)

*Oxalis corymbosa DC
Whiteknights Park (HJMB)

*Oxalis incarnata L. This species was recorded in error in No, 19
(Correction sent by AMS)

*Impatiens parviflora DC. Small Balsam
Whiteknights Park (VAP); Pepper Lane (BMN)

Genista anglica L. Needle Furze, Petty Whin
Silchester Common (LL)

Ononis spinosa L. Restharrow
Hogtrough Bottom (AMS)

Medicago x varia Martyn Hybrid Lucerne
Disturbed ground near Bulmershe College, Earley (AMS)

*Melilotis alba Medic. White Melilot
Rectory Road near Thurle Down (LL)

Trifolium fragiferum L. Strawberry Clover
Abundant in meadow downstream from Henley on the Berkshire bank (AMS)

Astralagus glycyphyllos L. Wild Liquorice, Milk Vetch
Sulham Woods (EMT)

*Vicia villosa Roth.
Whiteknights Park (HJMB)

Lathyrus montanus Bernh. Bitter-vetch
Clayfield Copse (LL)

*Rubus laciniatus Willd. Cut-leaved Bramble
Bramshill Plantation, Eversley; King's Meadow, Reading, near the railway (AMS)

Potentilla anglica Laichard Trailing Tormentil
Loddon Hill, Woodley; and possibly the hybrid P. anglica x reptans in South Lake Woods (AMS)

Aphanes arvensis L. Parsley Piert
Waste ground behind Eccles Close and Amersham Road (LL)

Aphanes microcarpa (Borss. & Reut.) Rothm.
Bearwood (HJMB) Snelsmore Common (AMS)

Rosa arvensis Huds. Field Rose
Clayfield Copse (LL)

*Prunus cerasifera Ehrh. Cherry Plum
Mill Green and View Island (LL)

*Prunus cerasus L. Sour Cherry
Edge of wood near Thealc. This is an uncommon species in this area (AMS)

Sorbus torminalis (L.) Grantz Wild Service Tree
New Copse, near Kingwood, Oxon. The tree on the edge of Clayfield Copse, Emmer Green, flowered and fruited this year (AMS)

Chrysosplenium oppositifolium L. Opposite-leaved Golden Saxifrage
Beenham (VAP)

Ribes sylvestre (Lam.) Mert. & Koeh Red Currant
View Island, Mill Green (LL)

Ribes uva-crispa L. Gooseberry
Near Lowfield Farm; copse by Berry Brook (LL)

Daphne laureola L. Spurge Laurel
Mapledurham (VAP); Clayfield Copse (LL)

*Oenothera erythrosepala Borbas Evening Primrose
Amersham Road allotments (LL)

Viscum album L. Mistletoe
On tree by Berry Brook (LL)

Thesium humifusum DC Bastard Toadflax
Thurle Down (LEC)

Sison amomum L. Stone Parsley
Beech Lane (VAP)

*Falcaria vulgaris Bernh.
Near Hermitage (by Miss W. M. Keens) (HJMB)

Oenanthe fistulosa L. Tubular Water-Dropwort
Eversley (LEC)

Euphorbia lathyrus L. Caper Spurge
Vegetable plot by Chiltern Road (LL)

Euphorbia exigua L. Dwarf Spurge
Chalk slope by Milestone Wood, Caversham Park Road (LL)

*Fagopyrum esculentum Moench. Buckwheat
Garden weed, Highgrove Street (AMS)

Parietaria diffusa Mert. & Koch Pellitory-of-the-Wall
Near Playhatch (LL)

*Populus gileadensis Rouleau Balm of Gilead
Large tree in hedgerow, waste ground, Eccles Close (LL)

Salix triandra L. Almond Willow
Near Berry Brook (LL)

Calluna vulgaris (L.) Hull Ling
Beechwood N.W. of Nettlebed (HJMB)

Vaccinium myrtillus L. Whortleberry, Bilberry
Extensive stand in wood near Silchester (AMS)

Primula veris L. Cowslip
Copse by Berry Brook (LL)

Primula veris x vulgaris False Oxlip
Caversham Park (LL)

Lysimachia nemorum L. Yellow Pimpernel
Clayfield Copse (LL)

Lysimachia nummularia L. Creeping Jenny
Eversley (LEC)

Lysimachia vulgaris L. Yellow Loosestrife
Eversley (LEC)

*Lysimachia punctata L.
Eversley (LEC)

Blackstonia perfoliata (L.) Huds. Yellow-wort
Goring (VAP)

Gentiana pneumonanthe L. Heath Gentian, Marsh Gentian
Flowering freely on Hook Common (per P. le Broc) (AMS)

Gentianella amarella (L.) Borner Felwort
Goring (VAP)

Nymphoides peltata (S. G. Gmel) Kuntze Fringed Waterlily
Whiteknights Park Lake (VAP)

Lithospermum officinale L. Common Gromwell
Bix Bottom (VAP); Gatehampton (AMS)

*Lycium halimifolium Mill. Duke of Argyll's Tea Plant
Near Playhatch (LL)

*Nicandra physalodes (L.) Gaertn. Shoofly Plant
Casual at 20 Castle Street (per S. Y. Townend) (AMS)

Atropa belladonna L. Deadly Nightshade
Thurle Down; Redlands Road, Reading (LEC); Tetley Court, Tilehurst Road (LL); Alexandra Road (VAP)

Solanum nigrum L. Black Nightshade
Mill Green (LL)

Verbascum nigrum L. Dark Mullein
Ashley Hill (VAP)

Misopates orontium (L.) Raf. Weasel's Snout
Henley tip (AMS); Eversley (VAP)

Veronica beccabunga L. Brooklime
Clayfield Copse; waste ground behind Eccles Close (LL)

Veronica polita Fr. Grey Speedwell
Waste ground behind Eccles Close (LL)

Pedicularis sylvatica L. Lousewort
Eversley (LEC)

Orobanche minor Sm. Lesser Broomrape
Chalk slope by Milestone Wood (LL)

Verbena officinalis L. Vervain
Lower Henley Road, Caversham, near dump (LL); Goring (VAP)

Lamium amplexicaule L. Henbit
Waste ground behind Eccles Close (LL)

Galeopsis angustifolia Ehrh. ex Hoffm. Narrow-leaved Hemp Nettle
Caversham Park Road (LL); Thurle Down (LEC); scarce cornfield weed near Newbury (AMS)

Nepeta cataria L. Catmint
Thurle Down (LEC)

Littorella uniflora (L.) Aschers Shoreweed
Flowering at Wokefield Pond (AMS)

Campanula glomerata L. Clustered bell-flower
Goring (VAP)

Legousia hybrida (L.) Delarb. Venus's Looking Glass
Moulsford (VAP)

Galium saxatile L. Heath Bedstraw
Beechwood N.W. of Nettlebed (HJMB)

Adoxa moschatellina L. Moschatel, Town-hall Clock
Beenham (VAP)

Valerianella locusta (L.) Betcke. Lamb's Lettuce, Corn Salad
Caversham Park Road (LL)

Dipsacus fullonum L. Wild Teasel
Goring (VAP)

Bidens tripartita L. Tripartite Bur-marigold
Mill Green (LL)

*Galinsoga parviflora Cav. Gallant Soldier
Luscombe Close, Caversham (LL); by the Thames at Reading (VAP)

*Galinsoga ciliata Raf. Blake Shaggy Soldier
Whiteknights Road

*Doronicum pardalianches L. Great Leopard's Bane
A healthy colony growing wild on east side of A417 near Streatley (possibly an escape?) (EMT)

*Petasites japonicus (Sieb. & Zucc.) F. Schmidt. Creamy Butterbur
Welford Park, near Newbury (VAP)

*Petasites fragrans (Vill.) C. Presl. Winter Heliotrope
Near the Abbey School, Reading (VAP)

Filago spathulata C. Presl. Spathulate Cudweed
Has increased in old chalk-pit, Henley Road (AMS)

Filago minima (Sm.) Pers. Slender Cudweed
Near Hermitage (by Miss W. M. Keens) (HJMB)

Gnaphalium uliginosum L. Marsh Cudweed
Hall's Lane (VAP); Caversham Park Road; cowfield off waste ground behind Eccles Close (LL)

Chrysanthemum segetum L. Corn Marigold
Eversley (VAP)

Cirsium eriophorum (L.) Scop. Woolly Thistle
One plant at Hogtrough Bottom, a new locality (AMS)

*Silybum marianum (L.) Gaertn. Milk Thistle
One plant, over six feet high, casual in garden in Heathway Road, Tilehurst (AMS)

Serratula tinctoria L. Saw-wort
Hogtrough Bottom (AMS)

Mycelis muralis (L.) Dumort Wall Lettuce
Whiteknight's Park, Erleigh end (VAP)

Potamogeton crispus L. Curled Pondweed
Bearwood (HJMB)

Convallaria majalis L. Lily-of-the-Valley
Two flowering spikes on Silchester Common. Many plants have been observed in former years but no flowers (AMS)

Polygonatum multiflorum (L.) All. Solomon's Seal
Padworth Gulley (VAP)

Ruscus aculeatus L. Butcher's Broom
Coley Avenue (VAP); Riseley Wood (LEC)

*Juncus tenuis Willd. Slender Rush
Broadmoor area (AMS)

Juncus conglomeratus L.
Beechwood N. W. of Nettlebed (HJMB)

Luzula multiflora (Retz.) Lejeune Many-headed Woodrush
Beechwood N.W. of Nettlebed (HJMB)

Galanthus nivalis L. Snowdrop
By the Thames, in copse near Dean's Farm (possibly a garden escape) (LL)

Epipactis purpurata Sm. Violet Helleborine
Over 50 plants on roadside near Stoke Row. Mrs. Simmonds has had several reports of large numbers of this species seen this season (AMS)

Epipogium aphyllum Sm. Ghost Orchid
Several plants flowered in the Bucks. locality (AMS)

Orchis morio L. Green-winged Orchid
Growing wild in garden in Peppard (VAP)

Lemna trisulca L. Ivy Duckweed
Berry Brook (LL)

Scirpus sylvaticus L. Wood Club-rush
Eversley (LEC)

Scirpus setaceus L. Bristle Scirpus
Near Hermitage (by Miss W. M. Keens); beechwood N.W. of Nettlebed (HJMB)

Epipactis helleborine (L.) Crantz Broad Helleborine
Wokefield Pond (A.M.S.).

Carex pendula Huds. Pendulous Sedge
Bearwood; one clump at Crowthorne (adventive?) (HJMB)

Carex pilulifera L. Pill-headed Sedge
Beechwood N.W. of Nettlebed (HJMB)

Carex ovalis Gooden Oval Sedge
Eversley (LEC); beechwood N.W. of Nettlebed (HJMB)

Sieglingia decumbens (L.) Bernh. Heath Grass
Bearwood (HJMB)

Festuca gigantea (L.) Vill. Tall Brome
Daversham Park (LL)

*Festuca heterophylla Lam. Grand-other's Hair
Bearwood (HJMB)

*Poa chaixii Vill.
Near Hermitage (by Miss W. M. Keens) (HJMB)

*Bromus inermis Leyss.
Roadside, Purley. (per P. le Broc) (AMS)

*Bromus diandrus Roth. Great Brome
Near Hermitage (by Miss W. M. Keens) (HJMB)

*Avena ludoviciana Durieu. Wild Oat
Waste ground, Aston Upthorpe cross roads (AMS)

Deschampsia flexuosa (L.) Trin. Wavy Hair-grass
Beechwood N.W. of Nettlebed (HJMB)

Alopecurus geniculatus L. Marsh Foxtail
Near Clayfield Copse (LL)

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THE RECORDER'S REPORT FOR VERTEBRATES

1966-67

By H. H. Carter, M.A., B.Sc., A.M.A.

I have received an encouraging volume of reports from members of the Society and other sources over the past year. Many of these testify to the survival or increase of animals in localities already known; others extend our knowledge.

Some observations of fish have been included this year, and no doubt more will be received in future years, so that all vertebrates will now be covered either by ourselves or by the Reading Ornithological Club.

MAMMALS

INSECTIVORA

Erinaceus europaeas L. Hedgehog

L. L. found one dead on waste land off the Bath Road opposite Downshire Square on 15/2/66. Six seen dead on roads in Sonning Common between 1/9/66 and 30/9/67. Three seen dead on Peppard Road, Emmer Green on 5/5/67, 5/7/67 and 9/8/67. One seen dead on road near Mongewell on 13/5/67. One dead on Basingstoke Road at Spencer's Wood on 29/5/67. One dead at Southcote on 6/7/67. One dead at Streatley on 1/8/67. One found dead by A. F. S. at the bottom of Mount Pleasant, Reading, on 15/10/67. Evidently hedgehogs were more cautious or less abundant than in 1965-6.

Talpa europaea L. Mole

Signs of recent activity in the form of mole-hills, mostly in March and April, at Thatcham, Pamber Forest, Mapledurham, Maidenhatch Farm near Bradfield (also one dead there on 17/4/67), Sonning Eye, the south side of Bowsey Hill, Aston Upthorpe Down, Wallingford, Shiplake and Harpsden golf course.

Neomys fodiens Schreber Water Shrew

L. R. L. sees this species periodically at Stanford Dingley in crecks and ditches alongside the Pang. C. J. L. reports one caught in Cutbush Lane, Harley.

Sorex araneus L. Common Shrew

Seen or heard on 8 occasions at Sonning Common from 10/9/66 to 9/8/67. Seen by P. J. C. in Reade's Lane, Sonning Common on 15/8/67. In the same general area, heard beside Peppard Road, Chalkhouse Green on 24/4/67, 6/5/67 and 17/5/67, and one seen dead there on 5/7/67; one near Peppard on 28/4/67; and two dead near Crowsley on 9/7/67. Heard at Sonning Eye on 8/2/67, two on 26/4/67, and one on 12/5/67; in the same area, one by Henley Road on 19/4/67. One at Aston Upthorpe Down, 25/3/67, and one dead there on 25/4/67; in the same area, one dead on Blewburton Hill, 4/8/67. One at Maidenhatch Farm, Bradfield on 17/4/67. One at Coley Park on 13/5/67. One at Wokefield Common on 6/7/67.

CHIROPTERA

Nyctalus noctula (Schr.) Noctule

Three bats probably of this species at Sonning Eye on 13/8/67.

Pipistrellus pipistrellus (Schr.) Pipistrelle

One at Bradfield South End on 3/10/66. One seen on the wing near Reading Gas Works by V. A. F. on 25/3/67. One at Hagpits Wood, Sonning Common on 18/6/67. One caught alive in a house in Sussex Lane, Spencer's Wood on 29/6/67 and later released at Sonning Common. Two at Sonning Eye on 13/8/67 with the preceding species. One north of Nettlebed on 22/9/67.

CARNIVORA

Vulpes vulpes L. Fox

A fox was lying up in a much overgrown hedge (since cleared) beside the Peppard Road on Bishopsland Farm on 9-10/9/66, to judge from the obtrusive odour. A hole was dug in the garden of 30 Norcot Road, Tilehurst, during the first week of February 1967, probably by a fox. C. J. L. reports a dog and vixen calling regularly about 2.45 to 3.15 a.m. at Chapel Hill, Tilehurst on 2-3/2/67. Fox tracks are frequently seen in the area, and dustbins are visited for food. Two males were shot there during May 1967. One was seen at Sonning Eye on 15/3/67. M. J. H. saw one cross Padworth Common and disappear into Padworth Gulley at 6.40 a.m. on 27/4/67. A. M. S. and I found abundant droppings on Silchester Common on 20/5/67. F. F. le B. heard one at Purley near Pangbourne on 15/9/67.

Meles meles (L.) Badger

B. M. S. reports badgers visiting the Winterbourne near Kimber's pond N. of Newbury. L. M. F. reports successful breeding in a sett at Crookham Common, south-east of Newbury, in 1966. E. M. T. reports a sett in use at Wheatley's Plantation, Whitchurch. I found a female dead beside the Peppard Road, Chalkhouse Green on 4/11/66, and a footprint in the same locality on 10/11/67; P. J. C. and R. J. C. saw another on the same stretch of road but just within Sonning Common soon afterwards. The carcase remained in a ditch until this was cleared on 3/2/67, thus disappointing my hopes of a naturally cleaned skeleton. Both animals were presumed to have come from a sett in Cucumber Plantation which was disused in April 1967.

In the same area D. J. W. reported a sett by Widmore Pool, Sonning Common, and I found signs of feeding in a wood nearby; the sett is now disused.

Mrs. Cox found a dead female beside Cannon Lane, Maidenhead on 2/1/67.

I found a disused sett with feeding traces nearby in Ashlee Wood, part of College Wood, on 5/3/67. A. M. S. reports a sett in use at Sulham Wood on 8/4/67. A. M. S. and I found footprints at Silchester Common on 20/5/67.

P. J. le B. reports a sett in Redhatch Copse, Earley.

Lutra lutra (L.) Otter

L.R.L. reports one shot at Woolhampton in 1966. G. W. D. found one shot at Catmore near East Ilsley, on the top of the Berkshire Downs and five miles from the nearest streams.

Mustela erminea L. Stoat

I saw one at Tutt's Clump, Bradfield, on 16/4/67. I received a male from C. P. which was killed by a car at Yattendon on 25/4/67. Mr. Bowden saw one near Loddon Bridge in the first week of October 1967.

M. nivalis L. Weasel

R. B. shot one at Emmer Green on 22/1/67. V. A. P. saw a dead one at Stratfield Saye early in 1967. A. M. S. saw one in Long Lane, Tilehurst on 8/4/67. I saw one cross the Woodcote Road near the Pack-Saddle Inn on 22/6/67, and found one killed on the road at Goring

Heath on 4/8/67. N. C. reports an immature male killed by a cat from 103 Woodcote Road on 8/8/67.

M. vison Schr. Mink

L.R.L. reports that feral mink are now to be found in the Kennet and upper Pang valleys from Greenham to Hampstead Norris.

M. (Putorius) putorius x furo L. Polecat-Ferret

An animal considered to be a feral polecat-ferret was seen by two people separately at Kingwood Common during the second week of May 1967.

ARTIODACTYLA

Dama dama (L.) Fallow Deer

E. M. S. reports deer, presumably this species, coming to drink from the Winterbourne at Kimber's Pond north of Newbury in 1966. I found abundant hoof-prints of this and the following species in the London Clay of Bowsey Hill on 5/3/67. From the variation in size I judged that both sexes were present. I also found slots in similar soil in Pamber Forest on 1/4/67 and again with A. M. S.on 20/5/67. P. F. Le B. found the skull of a male, charred after it had died and been reduced to a skeleton, in a burnt patch at Padworth Common on 18/10/67.

Muntiacus sp., probably M. reevesii (Ogilby) or reevesi x muntjac Muntjac

Typical hoof-prints on the south side of Bowsey Hill on 26/2/67, and on the east side on 5/3/67.

LAGOMORPHA

Lepus capensis L. Brown Hare

L. L. saw one at Dunsden Green on 26/6/66. I saw numbers of hares on either side of the Peppard Road in the area of Chalkhouse Green, Bishopsland and Bryant's Farms. These may be summarised as follows:

7/12/66 to 7/2/67	Single animals only.
8/ 2/67 to 21/2/67	Increase to maximum of 8 animals.
22/2/67 to 13/3/67	8 animals, often in a single group, east of the road.
14/3/67 to 18/4/67	Reduction to smaller groups and single animals.

24/4/67	7 together in a different part of the area, west of the road. (N.B. 1 was killed on the road on 5/4/67)
26/4/67 to 31/5/67	1 or 2 west of the road.
5 /6/67 to 16/6/67	1 to 5 west of the road.
19/6/67 to 21/7/67	Up to 2 east of the road, up to 5 west of the road, total 7.
1 /8/67 to 17/10/67	2 on 1/8/67, singles on 3 days in Sept. and Oct., all east of the road.

I also saw one in College Wood (an unusual habitat, but by no means unknown) on 4/3/67; 3 on Aston Upthorpe Down on 25/3/67; one there 29/4/67; and in the same area one dead on the Wantage road on 22/6/67, and one on Blewburton Hill on 3-4/8/67.

Oryctolagus cuniculus (L.) Rabbit

C. D. saw several in and near Didcot in the summer of 1966. V. A. P. found them at Ashley Hill early in 1966, and saw cases of myxomatosis there in September of that year. In the same area, I found them common on Bowsey Hill on 26/2/67. Increasing numbers were recorded at Kingwood Common on 20/1/67, and I found droppings there on 10/9/67. I have a number of records from the Sonning Common area, as follows: Chalkhouse Green; 1-3 on various dates from 29/9/66 to 3/10/67; Bishopsland Farm, 4 on 14/9/66 and 15/3/67 but none since; Bryant's Farm, 1 dead on 21/10/66; Comp Farm, an occupied warren on 1/1/67 in an old chalk pit; Bur Wood, 1 on 17/3/67, and many droppings on 11/6/67; Sonning Common, 1 in the grounds of the Primary School on 10/7/67. 1 at Sonning Eye on 22/12/66, and present there on 7/1/67; 2 nearby at Lowfield Farm on 7/9/66. L. L. found burrows at the edge of Blackhouse Wood, Caversham Park on 24/2/67, and saw a rabbit at Chazey Heath on 28/3/67. Droppings and a burrow found in Oaken and Bensgrove Woods (parts of College Wood) on 4/3/67.

A. M. S. saw one in Chamber's Copse near Kidmore End Road on 26/4/67. One seen at Englefield on 6/11/66. One at Maidenhatch Farm near Bradfield on 17/4/67. 2 or 3 seen on Silchester Common on 1/4/67, and burrows and many droppings there on 20/5/67. Present on Aston Upthorpe Down on 25/3/67; one dead on the road near there on 18/7/67; droppings on Blewburton Hill on 4/8/67.

Rabbits are evidently widespread in the Reading district, but common only in a few localities.

RODENTIA

Rattus norvegicus (Erxleben) Brown Rat

One seen dead on Peppard Road at Chalkhouse Green on 1/9/66 and

7/9/66. A juvenile seen crossing a road at Bournefield Farm near Bradfield on 23/10/66. One dead in Sonning Common on 19/2/67. A skull on Silchester Common on 20/5/67.

Apodemus sylvaticus (L.) Long-tailed Field Mouse

L. L. found corpses on waste ground off the Bath Road opposite Downshire Square on 23/2/66 and 30/2/67. Single animals seen in Kennylands Road, Sonning Common, on 16/10/66, 1/11/66, 16/2/67 and 23/2/67. M. J. C. saw one in a coal shed at the same locality on 28/1/67. In the same area, one dead on the Peppard Road in Rose Hill on 26/10/66, one on the same road by Bishopsland Farm on 15/11/66. T. E. E. saw one in Halls Road, Tilehurst, on 27/9/67.

The absence of records in the summer months is noteworthy.

A. flavicollis (Melchior) Yellow-necked Mouse

E. W. reports a colony of Yellow-necked Mice in a shed near Keeper's Cottage, Harts Hill, Thatcham, in the first week of March. Some were trapped, and H. N. Southern was able to confirm their identity.

Mus musculus L. House Mouse

A dead juvenile by Hagpits Wood, Sonning Common on 23/10/66. One trapped in Reading Museum on 7/3/67 and released at Sonning Common.

Arvicola amphibius (L.) Water Vole

L.L. saw one by the Kennet near Berkeley Avenue on 11/11/66; also beside Berry Brook below Lower Henley Road on 11/3/67, and nearer Lowfield Farm on 4/4/67; also at Mill Green just below Caversham Mill on 31/3/67. 3 seen by Berry Brook and the small stream to the south on 18/11/66, and in the same area one at Hill's Meadow on 14/5/67. One by the Holy Brook at Coley Park on 13/5/67. Again a number of records of up to 3 at a time from Sonning Eye, from 7/9/66 to 20/9/67.

Many holes in the bank of the Thames near Earley Power Station on 31/3/67. One in the Pang at Stanford Dingley and another at Maidenhatch Farm near Bradfield, both on 17/4/67. Many holes in the bank of the Kennet at Hungerford on 27/12/66. E. M. S. records water voles in the Winterbourne at and near Kimber's Pond north of Newbury in 1966.

Microtus agrestis (L.) Short-tailed Vole

L. L. records one killed by a cat on waste ground behind the new estate off Star Road, Caversham, on 15/3/67. One at Aston Upthorpe

Down on 25/3/67, and remains of one in a casting, probably of Asio flammeus (Pontoppidan) Short-eared Owl, at the same locality. One beside Widmore Pool, Sonning Common, on 9/7/67, dead.

Sciurus carolinensis Gmelin Grey Squirrel

L. R. L. records this species at Maidenhatch Farm near Bradfield. A grey squirrel has been in the habit of climbing up the side of a block of flats at Coley Park to visit a bird table. One seen on Reading Golf Course on 15/10/66. Many records from Caversham and Rose Hill, both dead and alive, throughout the year, including 3 together in Grosvenor Road on 4/10/67. Several records from localities between Reading and Sonning Common, the most being 2 at Chalkhouse Green and 2 more in Cucumber Plantation on 28/4/67. North of Sonning Common, seen at Chiltern Edge School on 28/2/67, Cane End on 4/3/67, one dead close by at Withy Copse on 4/8/67, dreys in College Wood on 4/3/67 and 4-5 squirrels there on 11/7/67. A female was picked up dead in the road at Moulsford on 5/5/67. Several were seen in Pamber Forest on 1/4/67. One seen at Binfield Heath on 11/7/67 and one dead nearby at Dunsden on 7/10/67. One in Prospect Park on 23/9/67. P. F. le B. saw one at Prospect Park and several at Padworth Common on 18/10/67; rare or absent at Bowsey Hill.

REPTILES

Natrix natrix (L.) Grass Snake

L. R. L. records this species rarely at Stanford Dingley. R. D. found one dead in a field below Lower Henley Road in mid-December 1966. This was a male 740mm. (29") long. A specimen 457 mm. (18") long was seen at Camberley. Mr. West killed one approximately 750 mm. (30") long in a garden in Park Lane, Tilehurst, in mistake for an adder on 19/6/67. A small one, about 300 mm. (12") long was seen in the grounds of the School Meals Service premises in Mount Pleasant on 22/6/67.

Vipera berus (L.) Adder

P. F. Le B. collected a cast skin below Beggar's Bridge, Pamber Forest in June 1967. The extended skin measured about 2 feet, but was too elastic to give an accurate record of length.

Lacerta vivipara Jacquin Common Lizard

Ten young lizards seen along the edge of a short stretch of road at Wokefield Common on 13/8/67. C. J. L. found a female with eggs at Little Heath Road, Tilehurst, on 12/5/67. P. F. Le B. records 2 young ones at Padworth Common on 18/10/67. One seen by E. M. T. on Aston Upthorpe Down on 27/4/67.

Anguis fragilis L. Slow-worm

One seen in Palmer Park on 14/9/67.

AMPHIBIA

Bufo bufo (L.) Toad

C. C. reports finding the spawn of this and the following species in Widmore Pool, Sonning Common, in spring of 1967. P. H. reports toads present in a pond in the grounds of the B.B.C. at Caversham Park at the same period. Seen dead on Peppard Road in Emmer Green and Rose Hill, near the previous locality, on 25/9/67.

Rana temporaria L. Frog

C. C. found frog spawn in Widmore Pool, Sonning Common, in the spring of 1967. P. H. saw an albino frog on the Micklands estate, Caversham, about the same time. L. R. L. reports frogs present at Stanford Dingley but not proved to breed.

Triturus cristatus (Laurenti) Great Crested Newt

M. H. found this species abundant in the chalk pit above the Flowing Spring by the Henley Road; also in Dead Man's Pond, Whitley Wood. P. H. records it in drains on the Caversham Park estate. All records without date, but early 1967.

M. H. also records males in breeding condition at Sindlesham Mill in the first week of March 1967.

Triturus vulgaris (L.) Smooth Newt

M. H. records this species from Dead Man's Lake, Whitley Wood, early in 1967. L. T. found a male in breeding condition in Whiteknights Lake on 18/4/67.

FISH

Lampetra planeri (Bloch) Brook Lamprey

L. R. L. reports that this species is common in the Pang at Stanford Dingley. Seen by A. P. at Tidmarsh Mill on 8/4/67.

Salmo trutta L. Brown Trout

E. M. S. reports regular breeding in the Winterbourne during February and March. L. R. L. records it as abundant in the Pang at Stanford Dingley and Maidenhatch Farm.

Thymallus thymallus (L.) Grayling

L. R. L. records this species as abundant in the Pang at Stanford Dingley.

Leuciscus cephalus (L.) Chub

5 or 6 young fish, about 150 to 200 mm (6 to 8 inches) long seen at Caversham Lock on 7/10/67.

Barbus barbus (L.) Barbel

Several young examples, 50 to 80 mm (2 to 3 inches) long taken from the Holy Brook at Coley Park by A. B. See also the Reading Mercury for October 28th 1967, page 17 for barbel in the Kennet.

Perca fluviatilis L. Perch

L. R. L. reports one only seen at Stanford Dingley in the Pang.

SOME NOTES ON BIRDS

Wildfowl

In recent years, reports of Scaup on local waters have become commoner, and I have myself seen three this year on Sonning Eye gravel pit. As in the case of other rare ducks, most of our visitors are immature birds which normally range further afield than their elders and so are more apt to turn up outside the normal range of the species. Young Scaup are only to be distinguished with difficulty from female Tufted Ducks, and any apparent Tufted which is seen to hold aloof from the main flock of that species on a gravel pit deserves a closer and longer look.

Wigeon are of course regular winter visitors to all the local lakes and pits of any size; a pair which remained at Sonning Eye till May 12th. and reappeared on July 5th. were less usual. The last comparable record was of a pair which stayed on at Bearwood Lake until April of 1964. Possibly Wigeon will add themselves to the list of locally breeding duck as Tufted Duck have done and Pochard are doing.

Canada Geese had a good breeding year at Sonning Eye, where three pairs raised 17 goslings to adult size. I have had several reports of noisy evening flights of these geese over Emmer Green and Caversham in the later part of the year.

A Village Duckpond

The former village duckpond at Emmer Green supports an ever-increasing bird population. A local inhabitant was responsible for the pair of white Aylesbury ducks and a grey and white creature of dubious parentage, apparently three-quarters Muscovy, and for the penning of a pair of wild or decoy type Mallard which reared a brood and now have the run of the pond.

Five Canada Geese appeared on the pond on May 7th, and 2 were still there on the 12th. Moorhens raised a succession of broods throughout the summer and there were 22 of various ages on the pond by the end of the season.

Pied Wagtails and Blackheaded Gulls also pay fleeting visits. A pair of Mute Swans made it their headquarters from February to April, reappeared in October and stayed till the end of 1967.

Bird Populations Recovering

My own observations, supported by a number of other records, show that populations of many susceptible birds now stand at a high level after a protracted recovery from the bitter winter of 1962-1963, while depopulated districts have been recolonised. In particular, Long-tailed Tits, Wrens and Goldcrests are once more abundant in their appropriate habitats. A. M. S. has a Wren in her garden in Highgrove Street for the first time since 1963.

Green Woodpeckers are more widespread than at any time since the hard winter, but are still rather patchily distributed. Pamber Forest and the heathlands at Padworth, Silchester and Wokefield hold plenty, and the Karpowicz brothers report successful breeding in and around Sulham Woods.

Elsewhere there are rather few, probably less in number than Greater Spotted Woodpeckers, though the difference is less marked than it was.

Absentees

Snipe, which I usually see in small numbers in winter at Sonning Eye, have been entirely absent there in 1966-67. T

Tree Sparrows, which formed flocks of up to 200 birds there in 1965 and 1966, have now dropped back to the much more modest level of preceding years, and have to be sorted out with care from flocks of House Sparrows.

List of Contributors:-

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Philip J. Carter
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Nicholas Coome
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The Rev. G. W. Dauglish
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Mr. A. Price
Mrs. V. A. Phillips
Mrs. E. M. Scott
Mrs. A. M. Simmonds
Mrs. E. M. Trembath
Linda Tosh
Mr. D. J. Weston

OBITUARIES

Dr. Somerville Hastings

Many people knew Dr. Hastings as an M.P. and as a doctor, but the Reading Natural History Society will remember him as a naturalist. On my book-shelf are three small volumes called "Wild Flowers at Home". Two of these are collections of sixty photographs taken by Somerville Hastings; one was published in 1906 and the other in 1907. Included among the one hundred and twenty photographs are such difficult subjects as Common Whitlow Grass (Erophila verna), Slender Yellow Trefoil (Trifolium filiforme) and Hairy Tare (Vicia hirsuta). Only this year, when I was discussing plant photography with Dr. Hastings, he offered to send me an article which he wrote for the Monthly Record of Science called "Knowledge". The article was entitled "Some Notes on Plant Photography" and it offers advice which is relevant to the present day, although it was published in October 1911. Under the title was written "Author of 'Summer Flowers of the High Alps', 'Toadstools at Home' Etc.". These two titles typify the naturalist we all knew so well.

To dwell first on the Alpine flora. The beautiful rock garden which Dr. Hastings had built in his garden was the dominant feature of his grounds. It contained many plants which he had brought back from the Alps, or which he had grown from seeds collected while abroad. The photograph of Cypripedium calceolus in "Wild Orchids of Britain" by V. S. Summerhayes was taken on this rockery. When in 1931 I was lucky enough to find Epipogium aphyllum, I was advised by Dr. Esther Carling (whom I met in the wood on that eventful day) to go to Dr. Hastings with my find. She told me that he was an authority on British orchids. When my father and I arrived at Brackenfell we found Dr. Hastings in his rock garden. The sight of the orchid in my hand so fascinated him that he broke away from his favourite hobby. He did not know Epipogium, and when, on searching through his books, he found that it had been discovered four times only in England, his excitement was as great as my own. Dr. Carling later told me that he had rushed over to her house at the sanatorium, and interrupted a tennis party in order to tell her the news.

The title "Toadstools at Home" will bring back countless memories of the enjoyable days which we have spent in the woods round Dr. Hastings' home. Guided and helped by this knowledgeable man, we have all added to our interests one more facet of natural history. He was always so modest, appearing to brush aside the fact that he knew the name of the particular fungus you held in your hand, as if it were the only one he could name, yet the same thing happened when countless more were thrust before him. We shall certainly miss him on these occasions.

On the Saturday before he died, I saw him gallantly walking down the footpath to the bank. Although he was nearly blind in the last few years of his life, yet he resolutely maintained his independence. When I was walking round his garden with him in the summer he laughingly warned me about a small pool, which he said he had foolishly walked into. He was sad at the overgrown nature of his beloved rock garden, but he could remember where many of his plants should be. He asked me to search for them, and when I could say that they were still there his pleasure was apparent in the look of contentment which came to his face.

On another occasion in the spring we were in the orchard, and Dr. Hastings was recalling the visit of a hoopoe to his garden. The detail with which he described it showed what a blessing his love of nature was to him in his partial blindness, for he could see this fascinating bird quite clearly in his mind's eye. He saw also the green-veined orchids which once grew under the apple trees, and he recalled the time when Kingwood Common was less overgrown than it is now. Tributes to Dr. Hastings in the daily papers scarcely mentioned the fact that he

was a biologist, yet those of us who knew him would say that he would prefer to be remembered in this field, rather than as the man who trained doctors or debated in the House of Commons.

Vera N. Paul

Dr. H. E. Quick, M.B., F.R.C.S.

Dr. Hamilton Quick, who died in May 1967 at the age of 84, had been a member of the Society for 18 years; he was its President from 1951 to 1953 and subsequently a Vice-President. He was elected an Honorary Member in 1965. Though prevented latterly by failing health from taking an active part in the Society's affairs, he maintained his interest in it and his pleasure in receiving visits from members whom he knew almost to the end of his life. By profession an ophthalmic surgeon, he was a distinguished amateur authority on Mollusca and was often a tutor at courses on this group at Field Centres. His key for the identification of the Land Snails of the Reading Area, published in the Reading Naturalist in 1952, has been much in demand by students from many parts of the country.

L. E. Cobb

GENERAL OBSERVATIONS

Fungi at Kingwood Common (supplementary records)

At the Society's foray at Kingwood Common on 7th Oct 1967, three species of fungi were identified that do not appear in the list of those recorded in 1945-66, which was published in the Reading Naturalist no 19 pp. 45-50.

They were Eccilia rhodocylix, Hygrophorus discoideus and Nolanea cetrata.

Damage to the Pasque-flower

In the Reading Naturalist no. 19 pp. 21-28, Mr. H. H. Carter drew attention to the damage suffered by the Pasque-flower (Anemone pulsatilla L.) in 'Juniper Valley'. Through the good offices of Dr. Bernard Levy, Miss Cecily Duthoit of the N.A.A.S. South-eastern Region in Reading was introduced to the problem, and the following notes have been culled with permission from her report.

Only the flower-heads are attacked, not the leaves, and the damage consists typically of a clean cut through the pedicel below the flower-head and above the involucre, sometimes to a bud and occasionally to an older flower. Sometimes parts of the flowers were removed. Some of the flowers were left lying near the parent plants, showing recent attack. There were others scattered about among the grass cover. In some small groups all the flowers were gone, but in general the bulk were left, producing a considerable purple area among the grass.

Slugs (Agriolimax reticulatus) were very occasionally noted grazing on the cut portions, and similarly snails (Helicella spp.), but the damage could not be attributed to animals of this group. It is known that the Wood Mouse (Apodemus s. sylvaticus) and other mammals such as the Bank Vole (Clethrionomys glareolus britannicus) can severely damage commercially-grown fields of anemones in Devon. H. C. Woodville (1953, Plant Path. 2 (1); 21-24) described exactly these symptoms, and pointed out that the centre of the flower, being rich in protein, was a much sought-after food for these animals in the winter. In his case, the severed blooms were not consumed among the crop itself (which provided no cover), but were found in various caches in hollows and holes in the banks nearby, providing a store-house for the winter.

Samples from Juniper Valley were sent to Mr. Woodville, who agreed that the symptoms were the same as in the cultivated plants and suggested that the grassy situation of the Pasque-flower rendered it unnecessary for mammals to collect and store the food. The flowers would make an important article of diet on this site, especially when the mammals were rearing their young.

Springtails on fungi

On the occasion of the Society's field meeting on 2nd September 1967, a member found some small spherical objects with spiny margins feeding in hollows on the cap of a fungus in a beechwood at Hardwick, Whitchurch, Oxon. They could not be identified at the time, but subsequently Mr. P. N. Lawrence of the British Museum (Natural History)

identified them as one of the largest of the Springtails or Collembola, Sminthurus (Allacma) fusca L. The fungus was tentatively named by Dr. F. B. Hora as Russula adusta. Such a host association for a little-understood group of insects is well worth noting.

NOTES

Reading Ornithological Club

Members are reminded that they may obtain copies of the Club's Bird Report at a reduced price upon application to the Club's Secretary.

Specialist Cooperation

In this age of ever-increasing scientific specialisation, the amateur naturalist is often faced with the problem of obtaining a name for a particular specimen, or of obtaining up-to-date ideas of matters of ecology, physiology or some other aspect of the amorphous land between the study of natural history and that of biology.

Aware of this need for assistance or guidance, the Society's Committee has recommended that Members requiring it should approach them in the first instance. Committee members will then attempt to put the enquirer in touch with another Member or other specialist, probably to the mutual advantage of both parties.

Tail-piece

We understand that a lecturer in genetics once wrote "frut fly" on the blackboard, changed it to friut fly" when he heard student laughter, and finally wrote "Drosophila melanogaster" instead. There is a lesson in this somewhere.

MEMBERSHIP

The following changes in membership have occurred since the publication of the Reading Naturalist no. 19.

Losses to the Society by death:

Dr. Somerville Hastings, Dr. Hamilton Quick, Mrs. Bentall, Mr. Burley, Mrs. Clements, Lady Severn.

Resignations and lapses:

Prof. Allen, Mr. & Mrs. Barrow, Mrs. Bramall, Miss Burnop, Mrs. Gresham Cooke, J. E. Cooper, Dr. Ellis, Mr. & Mrs. Fraser, C. P. Harding, Mr. & Mrs. Hilder, D. W. Larkin, Miss Le Besque, Miss J. Leggett, Mrs. Lockwood, Miss E. Moore, K. Nussey, M. A. Pearman, R. Pilfold, Mr. & Mrs. Plowright, Mrs. Poole, Mr. & Mrs. Quartermain, Mr. Roffey, Mr., Mrs. & Master Round, Miss J. Robson Smith, J. R. Vear, Henley Grammar School, Whitley Park Junior School.

Change of name:

Miss Linda Lynton (Miss Linda Lapienska)

Changes of name and address:

Mrs. A. Ayres (Miss A. M. Dengate), The Quant, Moorecote, Eversley, Hants.
Mrs. A. T. Ford (Miss A. T. Warman), 8A Brownlow Road, Reading

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